AN INVESTIGATION INTO THE ORAL PRODUCTION OF FRENCH BY CHRISTCHURCH THIRD FORMERS

A thesis presented for the degree of
Master of Arts in French
in the University of Canterbury,
Christchurch, New Zealand

by

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1970

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INTRODUCTION

The best way to make yourself understood in a foreign country is, said Jerome K. Jerome[1], to "Mispronounce as much as possible and throw in as many mistakes as you can think of." There may well be an element of truth in this statement, but the practice is, in general, of more use to the humourist than the traveller. Although the effects of mispronunciation are seldom as disastrous as for the Ephramites (Judges 12, 6), inconvenience and embarrassment are two of the least distressing consequences which can be avoided by better pronunciation. Nida's handbook for missionaries[2] gives accounts of both amusing and pitiable errors in communication through mispronunciation. Sten suggests that it may be vanity which makes us want to speak exactly the same as the occupants of another country, but submits that it is a harmless vanity, and that all things being equal, we get on better with a good pronunciation than a bad[3]. Few pronunciation manuals deem it necessary to justify their existence, but Léon in his Introduction à la phonétique corrective states the case neatly: "Une audition et une phonation correctes conditionnent la bonne compréhension orale et facilitent l'expression"[4].

It is apparent that oral French is at present encouraged in New Zealand schools, and in fact is an integral part of the Department of Education's policy on the teaching of Intermediate French[5]. An article by D.C. Welch, Assistant Curriculum Development Officer, Department of Education, in Volume 15 of Education, (June 1966) states:

> "Increasing emphasis is being laid on the importance of being able to understand and speak a language as well as being able to read and write it."[6]

The existence of public competitions for French speaking, exchange trips to New Caledonia for senior students, the inclusion of a dictée in the U.E. syllabus (1967) and the increasing popularity of the audio-lingual method in the last five years all suggest that the spoken language is developing an important role in the learning of French in New Zealand.

> "One thing in favour of an emphasis on the spoken aspect is that it is literally true that modern forms of communication and transport are making the world smaller and emphasizing a utilitarian aspect that it would have been fatuous to press thirty or more years ago in this country. Television, films, radio and the written word bring a foreign language within the orbit of us all." (Cyclostyled publication of the Curriculum Development Unit).[7]

H.A. Reeves, Curriculum Development Officer, in 1965 wrote:

> "The increasing emphasis on aural understanding and speaking of a foreign language heralds better balanced language courses and adds a further dimension to language learning."[8]

Yet the teaching of pronunciation seems to be a rather haphazard affair and incidental to the system as a whole. It is easy to hear a person mispronouncing a word. It is more difficult to correct him when repetitive imitation fails. To identify the precise errors which occur or to suggest why any particular mistake is made may well be beyond the expected scope of knowledge of any French teacher.

As a result, many New Zealand pupils enter University with considerable difficulties in oral comprehension and production. Patricia Quaife, in a paper on programming a remedial pronunciation course at the University of Auckland writes about "the retraining of English-speaking New Zealand students of French",[9] (my underlining) saying that the problem of oral production is increased by the formation and reinforcement of unacceptable speech habits over their previous four to six years of study. The universities are provided with language laboratories, at a substantial cost to the taxpayer, presumably in an attempt to improve production and fluency at this level. It is unfortunate, then, that at present much time which could have been used for fluency and pattern-practice, is devoted to remedial pronunciation exercises. However, much valuable and essential work could and should be done in the High School. Daily monitoring in the language laboratory has shown the writer that a large number of students fail

to make elementary distinctions (e.g. vous/vu, dans / dont) that should have been both taught and learnt in the early stages of language learning, or at least acquired during a five year High School course.

The foundations for the pronunciation of any language are laid in the first years of study, for it is at the outset that the learner enjoys the advantage of a "plastic" mind which can be shaped according to the teacher's will, and which can be trained to form good sound habits, or alternatively, bad. "At no other time shall we find such plasticity."[10] It was thought that an investigation at the Third Form level into the pronunciation of French might reveal the most common mistakes being made by pupils and likely to be carried on throughout their schooling. It is not the object of this thesis to ascertain that students do make mistakes. Teachers are already agonizingly familiar with this fact. But rather to present the most common errors made for a variety of sounds, together with suggestions as to why, as far as possible, these mistakes are made. It is only when this "why" is known that useful corrective measures can be taken.

A large amount of time and money has been spent on research into foreign language teaching, pronunciation included.[11] Even on French specifically, the amount is considerable[12]. However, how much of this is directly

relevant to Third Form pronunciation of French in New Zealand? Most of the research of any relevance to us seems to have been conducted in Britain or the U.S.A., and consequently is orientated towards British or American pronunciation problems. Since New Zealand pronunciation of English is unlike both British[13] and American[14], one is led to wonder how applicable such books are to the New Zealand pronunciation of French. They also present superficial difficulties to the non-specialist New Zealand reader by illustrating sounds with words whose pronunciation (in American English) he is unfamiliar with. For instance, when describing 'English' vowel sounds, Politzer and Hagiwara[15] and Politzer[16] give as an example of the back /ɑ/ the word "hot", and of the central /ə/ the words "cut" and "thunder", both of which are misleading to the New Zealander who generally uses /ɒ/ and /ʌ/ respectively in these positions[17]. French writers on the pronunciation of French by foreigners (Léon, Rigault, Delattre) tend to try to accommodate all languages, and do not discuss specific languages in detail, although Pierre Delattre has done some very interesting work on some languages. Of particular interest to many on a general level would be his photographic (including X-ray) study of the French 'pure' vowels in comparison with American diphthongs[18].

Two books by Australian linguists (Batt and Dutton)[19] are probably of more relevance than most to New Zealanders, although neither is intended specifically for the Australian student. Also, both are aimed primarily at students at University level, and emphasis is laid on the articulation of the sound, together with a note of warning about one or two errors that are likely to occur.

As for New Zealand pronunciation of French, it seems that no-one can know definitely what problems exist, since it appears that no systematic study has previously been undertaken. Some teachers will know from experience what to expect; for them this thesis may be confirmation of long-held suspicions. However, each new year sees the introduction of more teachers of French, with little practical experience and consequently little knowledge of prevalent and expected errors. If the commoner errors could be found, and the reasons for them suggested, teachers would have a starting point for remedial pronunciation. It was with teachers in mind that this study was initiated, in the hope that the results might be useful to them.

Since the average French teacher probably has little knowledge of the linguistic theory behind the investigation, theory which is necessary to an understanding of both the study and results, the first chapter includes a general introduction to several aspects. Where possible,

explanation both there, and in subsequent chapters, has been made in simple language, technical terms being used only when unavoidable, or when it would occasion too much circumlocution not to use them, and after explanation.

For this study, eighty-two Third Form pupils from six Christchurch schools formed a randomly chosen sample whose oral production of French would be studied. As pupils taught by the audio-lingual system could well have different problems from those of the grammar/translation method, it was decided to consider them as a separate sub-group. Similarly, for reasons to be outlined later, those who had been given French at Intermediate school were separated from those who began in the Third Form. Thus the sample has four divisions, according to method and experience, but is also considered in its entirety.

For the analysis of tendencies in a population, a sample does not have to be large, so long as it is representative of the population. "It is surprising to the uninformed person how small a total sample can yield a valid predictive index."[20] For most statistical tests, a sample-size of 30 is the minimum - beyond this number the reliability of generalization is unsatisfactory to most scientists.

This means that a sample of approximately 80, so long as it is representatively chosen, is a relatively large one, which means that one should be able to generalize from the sample with a high degree of certainty. The size of the sub-groups, however, is a little small for generalization (although Scherer and Wertheimer did so with as few as 24 and 25 in a comparative survey), but tests of significance (e.g. Chi-square) can be used with reliability where numbers of observations are sufficient.

With respect to the corpus size, most phonemes were represented between four and eight times, which, in comparison with other studies, is a large number of repetitions. 25 items (excluding contrasts), were repeated a total number of 134 times, which seems a fair representation. With these in turn uttered by 82 pupils, the whole corpus consisted of approximately 11,000 phones for analysis.

I would like to extend my thanks to the staff and pupils who participated in this study, including those of the Christchurch Teachers' College who contributed to one aspect of it. I am also grateful to Professor Gregson and Mr J. Mitchell, of the Psychology Department, University of Canterbury, for help with the design and advice on statistical aids to interpretation, and to Mr G. Dunn of the Classics Department, Victoria University, for another

perspective. Particularly I wish to thank Mr Tattarakis, Senior Technician in the Department of Romance Languages, University of Canterbury, for moral support and technical assistance, including long hours spent at schools and editing tapes. Without his help this study would have been a much more formidable task. For continual help and encouragement I am indebted to staff members Mrs E. Gordon (Department of English), Mr A.K. Lojkine and Mr P. Tremewan (both of the Department of Romance Languages) whose guidance and criticism ~~was~~ were invaluable. I have also valued the help of my friend Olive Shaw, who was a regular source of reference for psychological, methodological and statistical approaches. My most overwhelming debt is to my husband, Rodney Doak, whose help and interest at all levels, creative and corrective included, have been a constant source of support.

CHAPTER I

THEORETICAL PERSPECTIVE

Language

Language has been often and variously defined, especially over the last seventy years. A brief review of the basic concept of some of the most important and influential linguists, who have founded whole schools of thought, will show the diversity of opinion whilst exposing any common points.

Ferdinand de Saussure[1], one of the founders of modern linguistics, at the turn of the century saw language as a system of relationships between "concepts" and "sound-images", identified according to conventions, but modified by time and social forces. Leonard Bloomfield[2], however, in the 1920's and 1930's took a different aspect which rejected the relationships specified by de Saussure. Language was seen as an entity:

> "The totality of utterances that can be made in a speech community", he wrote, "is the language of that speech community."

A behavioural psychologist, B.F. Skinner[3], writing about a decade later, had yet another view based, naturally, on behavioural psychology, considering language as "positively reinforced responses to stimuli". His tenet has been challenged by Noam Chomsky who, in his theory of

Transformational Grammar, takes the Cartesian standpoint and asserts that there must be an element of creation in language since children, (or anyone), can put together sentences they have never heard before but which are comprehensible to their fellows[4]. On the other side of the Atlantic, a contemporary British linguist, M.A.K. Halliday[5] who tried to produce a general linguistic theory, and sees phonology in relation to all other aspects of language, defines (spoken) language as "organised noise used in social situations".

These definitions give an indication of the many different perspectives in which language may be seen. Naturally enough a person's definition of language depends on his approach to the subject, and the particular aspect of language that he is studying. However, one item that seems to emerge as common to all these points of view is that language is a social phenomenon. One of M.A.K. Halliday's colleagues, Professor A.C. Gimson[6], author of An Introduction to the Pronunciation of English provides a concise but precise definition which has affinities with that of de Saussure of sixty years ago. From the perspective of an investigator of a foreign "language" taught to and learnt by school children in New Zealand, this definition seems the best:

"Language is a system of conventional signals, used for communication by a whole community."

Phonetics and Phonemics

The operational definition of language, i.e. that which is meant when "language" or a "foreign language" is referred to or implied in this paper, is set out above. But within this framework, further precision is required. Halliday speaks of "organised noise"; Gimson of "conventional signals"; yet there is virtually no difference in what each means by these two phrases. To discover how this is so, we may begin by studying the "noise" aspect.

The number of sounds that can be made by people is almost unlimited[7]. The linguistic context of a sound - the speed of utterance, its position in the word and between other sounds - will lead to variations in pronunciation. Differences in pronunciation between individuals are a fact of life, whether due to anatomical differences - size and shape of head, mouth, tongue, nose and so on, or to personal habit. Even the "same sound" repeated by an individual has been shown on a spectrogram to vary with each utterance[7]. Yet in spite of the apparently unlimited variety of sounds, a human communication system is possible. If the variety were for practical purposes unlimited, with no two sounds being the same, no such system would be a working proposition.

This apparent contradiction can be explained by the fact that any one sound has a limited linguistic function[8], i.e. in language, its use is limited. If we hear a person repeat, for example, the French word "chat", we are almost certain to say that the same sound sequence has been repeated, even if instrumental measurements reveal marked differences[9]. This discrepancy points to two different levels of consideration; one is concrete and measureable, the phonetic level, speech, or in Saussurean terms "parole", the other, the phonemic concerns an abstraction, which may be called language, or "langue" (de Saussure). The repetition of "chat" on the phonetic level will show measureable differences from the first utterance, but the nature of these differences will make them irrelevant for the identification of the sound as part of the French language, since people recognise only a limited number of differences[8].

Phonemes

Included in this pattern of conventions is a system of significant sound units. A number of sounds, all slightly different, but fulfilling the same linguistic function, may be grouped together, and classed as one sound for the purpose of discussing that language. When it is necessary to distinguish the two uses of the word 'sound' as in the

last
^sentence, linguists use the words 'phone' and 'phoneme'. A phone, or "speech-sound" is a unit of sound on the concrete, phonetic level.

> "The distinctive elements of language, i.e. the elements which serve to distinguish one word from another are the phonemes. The distinction between two phonemes is significant, i.e. capable of distinguishing one word from another."[10]

Such is Daniel Jones' definition of the phoneme. Other linguists (Bloomfield, Trubetskoy, Hjelmslev) have their own definitions, according to their conception of language, but the fundamental idea remains the same. Examples can best explain the term further.

In French, the words peau /po/ and beau /bo/ are differentiated only by the sounds /p/ and /b/, which are said to be "in opposition". Thus in French these two sounds belong to different phonemes. (Oblique strokes, by convention, represent phonemic transcription.) Similarly, /t/ and /d/, /r/ and /l/, /e/ and /y/ are all capable of changing the meaning of a word by replacing each other. (Tout, doux; riz, lit; thé, tu), and belong to different phonemes.

On the other hand, some distinctions which can clearly be heard to exist between sounds are not linguistically meaningful, and the sounds are said to belong to the same phoneme. Such is the case of voiced [l], as in lu, and voiceless [l] as in boucle, or the /k/s of qui (palatal) and coup (velar). These phones are

in "complementary distribution", and are thus members of the same phoneme, since they are never in opposition. The choice is automatically determined by the vocalic context, and it probably does not occur to the majority of people that the sounds are different. Alternatively, the choice may sometimes be determined by individual or regional habits, for example the /t/ phoneme has the glottal stop [ʔ] and the phone [d] as "free" variants in the pronunciation of "water". (Cockney/wɔ:ʔə/, American /wa:də:r/).

All phonemes have their existence in the context of a particular language, and a contrast that is significant in one language may not necessarily be so in another. The examples that follow are general. The application to French will be shown later. To take a common example, in Japanese[11] and some African languages[12] the linguistic functions of /l/ and /r/ are the same - they can be interchanged without altering the meaning of words, whereas to do the same in French would change 'riz' into 'lit' or vice-versa. By the same token, the English make no meaningful distinction between the different sorts of /l/ whereas in Russian[13] and some dialects of Polish[14], clear [l] as in "light" and dark [ɫ] as in 'full' are in opposition. Again, French and English hear two sorts of alveolar fricative, one unvoiced /s/, (casse (French), place (English)) and one voiced, /z/ (case (French), plays (English))

but in Spanish these are both variants of the same phoneme, the choice being automatically determined by the context[15].

In short, each language has its own range of phonemes, or significant contrasts of sound within itself. In addition, the "norm" for a phoneme varies from language to language. Thus the task of the learner is on two levels; on the one hand to learn the range and limits of phonemes for the Target Language, and when to use them, and on the other to realise the differences between each phoneme and its nearest equivalent in the native language. Dutton, after discussing the effect of substituting English dark [ɫ] in the French word "elle" (where the French use clear [l]), continues:

> "it is precisely such differences which, while less significant linguistically than those between separate phonemes <u>within</u> a language, make an important difference to our pronunciation of a foreign language. Acquiring a "good" pronunciation is very much a matter of recognising and reproducing the differences which exist from one language to another between what might be considered linguistically "same" phonemes."[16]

Language Learning and Pronunciation Errors

It is well known that children up to about ten to twelve years of age, put in a new linguistic environment, can learn to speak any language "perfectly"[17]. But after this age the plasticity which allows the child to imitate

faultlessly and unselfconsciously decreases, and as the habits of his own language grow stronger, so his ability not to use them becomes less. He is dominated by the pattern of phonemes he has become accustomed to hearing and using. Whatever sound he hears is categorised accordingly, and the sounds he uses are similarly drawn from this familiar range of phonemes[18].

Thus the older child or adult, when learning a foreign language, has to break down old speech habits and establish new ones. There are two main aspects of this process to consider - discrimination (hearing the new sounds) and articulation (speaking them). As shown above, two types of discrimination are necessary:

1) hearing phonemic differences within a language, and

2) hearing the difference between them and the sounds of the native language which are likely to be substituted. Until these differences are realised and clearly heard, the student will be unable even to begin tackling the problem of articulation.

What in fact usually happens, is that the familiar phonemes of the native language are identified with and substituted for those of the Target language. A number of possible sources and types of pronunciation errors have been suggested by various people[19], but not all are relevant to English-speaking people learning French, or to a

study of the first year of French. However, a combination of those adopted by Politzer and Moulton[19] seems to provide classifications which are neither too narrow nor irrelevant to this study. These errors may be classified broadly into phonetic, phonemic, spelling - influenced and distributional - categories which I will explain further.

Phonetic errors: These occur when the Target language has a phoneme which corresponds to, but is phonetically different from, a phoneme in the native language. The student carries over his English habits into French, and consistently uses the wrong phone. Examples of this are the substitution of the English diphthongs for the French pure vowels, and of the English frictionless continuant /r/ for the French uvular /R/. This type of error is not phonemic, since it does not produce a word different from the one intended. It is a phonetic mistake, which in W.G. Moulton's words "sometimes leads to incomprehensibility, but more often sounds very foreign and slightly ridiculous"[20].

Phonemic errors: These are perhaps the most serious errors, since by carrying over English phonemic habits into French the student uses the wrong phoneme, and thus may produce a word quite different from the one intended. This sort of substitution occurs when the Target language has a

phoneme which does not exist in the native language and the learner substitutes some other phoneme or combination of phonemes, for instance for the French nasal /õ/ in the word 'dont' /dõ/, the substitution of the non-nasal open /ɔ/ + /n/ renders /dɔn/ - the word 'donne'. The converse of this situation occurs when the native language has a phoneme that is non-existent in the Target language, such as the English /θ/ as in 'thin' which does not occur in the French phonemic system. As a phonemic problem, this does not cause much bother, as the learner has merely to exclude this from his range.

The major problem to be overcome in the situation above occurs as a result of the spelling as when students use a /θ/ in such words as 'méthode', 'théâtre', by analogy with English cognates. Two other similar error types are the pronunciation of initial (e.g. h) and final consonants (e.g. s,t) which are not pronounced in French, and the use of English phonemes for letter sequences which signify quite different phonemes in French (e.g. gn, ch).

Distributional problems arise when the student encounters a sound with which he is familiar, but in a position unfamiliar to him. For example, in English the sound /ŋ/ as in 'sing', 'singer' occurs in the middle and at the end of words, but never at the beginning of words, whereas in Maori it is quite natural for /ŋ/ to occur at

the beginning of words (ngaio, Ngauruhoe). In English the sound /ʒ/ occurs in the middle of words (measure, pleasure) but not at the beginning, as it does in French (e.g. Jean). Such cases are a source of potential error, since the learner has to learn to use the sound in a new position.

Errors of one or all of these types are likely to be made by the English-speaking person learning French. Errors classified as 'spelling influenced' are most likely to be of a phonemic nature, but if the major cause of these is obviously the spelling, then it seems more informative to classify them separately. All four error-types arise from the 'interference' of the native language with the learning of the foreign language.

Language Learning and Teaching Methods

Theoretically, if a child were taught young enough (i.e. before the habits of his own language become established), and by native speakers of the Target language, such interference would not take place, and the child would learn to imitate perfectly the (French) sounds he heard. This rationale is part of the reasoning behind the audio-lingual method of teaching, which is, as mentioned above, becoming increasingly popular in New Zealand. Since 1965, when six schools began pilot schemes, numbers have increased considerably.

Part of the basis of the audio-lingual method is outlined by H.A. Reeves (Curriculum Development Officer, 1965, Department of Education) as follows:[21]

> "Over recent years there has been an ever-increasing interest in the oral-aural aspects of language-teaching. A major reason for this development has been the realisation that children have a great potential for learning a second language in somewhat the same way as they learn their own - though, obviously, the analogy cannot be carried too far. Children hear their mother-tongue spoken all around them, they relate the spoken words to their experience, and they repeat what they have heard. They learn how words change, how they go together, and how they affect each other when they are fitted into patterns as sentences. Before long, children acquire a working knowledge of the sound patterns and syntax of their language, largely through imitation and analogy. Modern audio-lingual and audio-visual courses in foreign languages are commonly based on these ideas."

Two other important characteristics of the audio-lingual method are what learning theorists call 'immediacy of reinforcement' and 'activity' rather than passivity on the part of the learner.

> "The sooner the consequences of a response are fed back to the learner, the more efficiently he will acquire new skills. Many of the practices advocated by the audio-lingualists contain this feature."[22]

Psychological study has also shown that it is more difficult to acquire knowledge "if the learner adopts the passive set imposed on him by listening to a lecture or reading a book than if the learning situation is set up so as to require him to spend much of his learning time in actual practice. This active participation is also

fundamental in all programmes for teaching machines."[23] If these theories hold true in their application to the audio-lingual method, then this method should be more efficient than the 'traditional'.

The learning of skills in the audio-lingual method is based on the natural order of HEAR, SAY, READ, WRITE[24], which, according to D.C. Welch,"most language specialists now recognise is both highly effective and psychologically sound".[25] This system "capitalizes on the child's ability for mimicry-memorization of complete meaningful patterns"[26], and should keep interference from the native language at a minimum. Thus, theoretically and under ideal conditions, few problems of pronunciation should be encountered using the audio-lingual system.

However, the suitability of some aspects of the audio-lingual system for the teaching of adolescents has been seriously questioned, specifically by psychologist David Ausubel who states:

> "certain features of the audio-lingual approach are psychologically incompatible with effective learning processes in [adolescents]. These features include (1) the rote learning of phrases; (2) inductive rather than deductive learning of grammatical generalisations; (3) avoidance of the mediational role of the native language; (4) presentation of the spoken form of the language before the written form; and (5) insistence on exposing the beginner to the 'natural speed rendition' of the spoken language."[27]

John Carroll, also a respected psychologist, commented in 1965 on the audio-lingual "habit":

> "[it] was, perhaps, 15 years ago in step with the state of thinking at the time, but it is no longer abreast of recent developments".[28]

If the more recent theories of adolescent psychology are correct, it is likely that the audio-lingual method may be more suited to Intermediate School pupils than to those at High School.

French teaching in the Intermediate School also emphasizes oral French.

> "The whole purpose of beginning language teaching in New Zealand at the Intermediate level would be lost unless the oral approach be used. It capitalizes on the younger child's greater powers of imitation of sounds, lack of self-consciousness and great natural capacity for assimilating the speech patterns of another language." (Programme for a one year course in French in Intermediate and Primary Schools, Department of Education, New Zealand.) [28A]

Ideally, therefore, children with Intermediate experience of French should have greater oral competence than those without. However, this approach to the teaching of French makes great demands on a teacher's grasp of the language. Even if records are used, which does not always happen, the teacher bears the greater responsibility for the lesson programme, and in inexpert hands, the end-product may be the opposite of what was intended[29]. If children at Intermediate school level assimilate a distorted pronunciation, then the developmental stage which theoretically is being used to advantage may in fact have an

adverse effect, by 'fixing' this erroneous sound pattern, making subsequent 'relearning' very difficult. Thus it is difficult to predict the actual effect of an Intermediate introduction to French.

In High Schools the traditional grammar/translation method, by its nature, develops written skills, possibly to the detriment of oral. Textbooks, presentation of material and exercises are all designed to develop primarily reading and writing skills (compared with audio-lingual, geared first to 'listening and speaking'). Those oral skills that are acquired are also dependent to a certain extent on the pronunciation of the teacher, whereas the audio-lingual system provides native models for imitation. The method does, however, allow scope for individual variations of presentation, according to the aims and desires of the teacher, and under favorable circumstances, pupils taught by this method should be able to achieve just as high a standard of oral fluency as those of the audio-lingual method.

Other Studies

Comparative studies of the two methods (audio-lingual and 'traditional') have yielded conflicting evidence as to the utility of each method. Of the more recent studies, one by Carroll et al, 1959[30], compared a high school class with a language laboratory, and one without. The experi-

ment showed no (statistically) significant difference between the classes in auditory comprehension skills, and the class trained with the aid of the laboratory did slightly (and significantly) poorer on the tests of reading, vocabulary and grammar. Carroll, however, did not doubt the utility of the laboratory, but pointed out that the instruction needed to be strengthened.

It must be brought to the reader's notice that although most studies consider audio-lingual as a method using a language laboratory, the results of a recent and seemingly reliable study showed that "no language laboratory system as employed influenced achievement more than a classroom tape-recorder"[31]. If the results of this study are accepted, the conclusions of comparative studies may be generalised to include the audio-lingual systems using a classroom tape-recorder.

From 1959-1963 the Bureau of Audio-Visual Instruction, Board of Education of the City of New York, undertook two related studies of Foreign Language Laboratories in Secondary Schools[32], using French as the target language. The results of the first study, which compared classes with sixty minutes per week of class-time spent in the language laboratory, and classes without this factor, showed significant gain of audio-lingual skills, without

loss of the traditional skills. The second compared four different types of language laboratory experience and had a control group using no electronic equipment. All experimental groups gained more than the control group in the overall quality of speech, but the control group equalled the performance of the daily laboratory groups in pencil and paper measures and in three speech measures related to answering questions.

The utility of the language laboratory was seriously questioned by Keating[33], who in 1963 "attempted to assay the results that were obtained with the laboratory as it was actually being used." Many previous experiments had been with experimental classes in conditions short of ideal, but nevertheless artificial. "The real test of effectiveness must," in the words of later investigator Philip D. Smith, "reflect the reality of its milieu."[34] In Keating's study over 5,000 students of French from 21 school districts and at three levels of experience were tested. Results consistently favoured the traditional method, with one exception, "that in speaking the test words of the speech product test, the first year laboratory students were superior to the first year no-laboratory students"[35].

Scherer and Wertheimer[36] who conducted a 'classic', rather idealised experiment with a year's intake of students learning German at their college, also found that

the Audio-Lingual method resulted in better speaking skill that did the traditional method employed in their study, and that this superiority of the Audio-Lingual group persisted through the second year in spite of the fact that both groups were treated in the same manner during that year. In the same year, the city of Philadelphia, in a 19 school assessment of Traditional and Audio-Lingual in French and Spanish[37] reported that those learning with the Audio-Lingual method did better than those without.

A report in 1969 of the findings of Philip D. Smith Jnr[38], who conducted a large scale research in Pennsylvania indicated similar results.

> "Students achieved most in the Traditional strategy despite individual differences."

Traditional classes scored significantly higher in reading and writing in French and just as well as the others on the French speaking test. Twice weekly utilization of the language laboratory caused no significant differences in achievement, either by laboratory type or when contrasted with the classroom tape recorder.

Relevance to the Present Study

Since the present study is concerned only with speech production, the relevance of other studies is largely

limited to this single aspect. While there is definitely conflicting evidence as to the overall benefits of the Audio-Lingual system, the results above seem to indicate that in speech production at the first year level, it should yield results as good as or better than the traditional, although not too much can be assumed without further experiments.

Experiments or studies of the possible influence of previous experience on achievement are not nearly as numerous as those relating to method. Birkmaier[39] reports an American study by Justman and Nass, who found no apparent differences in testing the High School achievement of 100 matched pairs of students who did and did not have foreign language experience. However, he gives no indication of the type of tests administered, and it is difficult to assess its relevance to the current study.

Most previous studies involving comparisons have been of an experimental nature and have used a scoring technique to yield for each subject numerical results which have been tabulated and subjected to statistical procedures. The present study differs in two important ways. Its major aim is to be descriptive of the sample as a whole, regardless of method and experience. Secondly, in case these two variables exercise a consistent influence, the sample is

also divided into four constituent parts, the object of this being to elicit a more reliable description of each, not to establish which, if any, system is best. In addition, any major intergroup differences will be shown. Thus, despite the differences in aim, the methods and controls used in other studies provide valuable insights into those required for this one, and their results show that very little can be assumed about the benefits of either audio-lingual or traditional teaching methods.

Although the other studies mentioned tend to be on a larger scale than the present one, it must be noted that the research staff is correspondingly larger, and supported by grants of thousands of dollars. Most authors seem to have been 'project directors', with a research team working for them. The New York Audio-Visual Bureau Investigation, whose second (larger) study involved 17 classes over ten schools had a project staff of 37. Scherer and Wertheimer, who started with 289 students, had "teams" of raters to score their tests.

All studies must be seen in perspective. The present study, with one observer, has less complex aims, being designed to reveal any patterns (errors included) in the pronunciation of French by Third Formers in Christchurch a) as a whole, b) according to two methods of teaching and the presence or absence of experience.

CHAPTER II

THE PHONEMES UNDER STUDY

While in a broad context, it is convenient to say that this study is of "pronunciation", it must be brought to the reader's attention that it is a very limited study, concerning only one aspect of pronunciation, viz. phonology, and this within definite limits. The field of pronunciation is a large one and includes patterns of intonation, rhythm and stress, customary division into syllables, elision, enchaînement and liaison. All these factors contribute to the pronunciation of any phrase or sentence, or even word. However, the inclusion of all these factors in a small-scale study is unrealistic from the nature of the factors and of the research. Since there is a wide range of variation of such things as intonation, liaison, or the "groupe de mots", there are many difficulties involved in constructing tests to measure them. Secondly, the limited amount of time at the disposal of one research worker at Master's level precludes extensive examination of all aspects of a subject. Thus words will be considered as separate phonemic entities (except for one or two cases which will be mentioned specifically), a reasonable limitation since a control of the phonology of a language

is
basic to a speaking knowledge of it[1,2].

Interference and Phonological Comparison

Interference of one language with the learning of another can be predicted by comparing the phonological system of each. Comparison has been made by various linguists (Politzer, Batt, Dutton) between British (R.P.) or American pronunciation of English and French and differences have been found to exist between the two systems. After analysing, full face, profile and X-ray profile movie films, with a sound track, Pierre Delattre concludes:

> [L'anglais et le français] contrastent ... dans tout le domaine phonétique"[3].

He points out that English consonants tend to be "aspirées, palatalisées, postérieures", where French are "inaspirées, dures, antérieures"; certain English vowels tend to be diphthonged, compared with French pure vowels. In another article[4], he examines pronunciation habits characteristic of French, and notes in both vowels and consonants tenseness of articulatory muscles and forwardness of articulation.

His third point is that the intensity of the syllable begins to decrease at a later stage of articulation than

in English. This last factor, he says, means that vowels take the dominant part in syllables, a deduction which accounts for the maxim insisted upon at the Institut de Phonétique of the Sorbonne:

"La voyelle est de toute importance en français"[5].

Studies of the consonantal systems (Politzer, Batt, Léon) have shown that although there are considerable phonetic differences between the two systems, most English consonants are acceptable substitutes for French ones, especially at an elementary stage[6].

For these two reasons, it seemed of more value to compare the two vocalic systems, especially since other investigators had stated that there were few similarities between their variety of English vowels and French vowels.

> "The entire French vowel system was considered sufficiently different from the English vowel system to cause interference.[7]"
>
> "None of the sixteen French vowels has an exact counterpart in English.[8]"
>
> "There are <u>no</u> French vowel sounds that have an exact counterpart in English.[9]"

Certain semi-consonants and consonants have, however, been included in the study where they have been thought to constitute a special problem for the learner.

"New Zealand English"

Since a detailed description of the New Zealand realisations of English phonemes has not yet been produced, a comparison of our vocalic system with that of French presents some difficulties. Professor Arnold Wall[10] outlines certain realisations then noticeable, under the designation of 'prevalent errors in New Zealand pronunciation', and a number of his observations correlate with those of G.W. Turner[11] who makes some informative references to differences observed between our pronunciation and R.P. These two sources provide a frame of reference which should at least be of more relevance than R.P., even if not comprehensive.

R.P. is a description of a standardised norm for pronunciation - any description of this kind is of necessity standardised, since pronunciation varies from one person to another. In New Zealand, it seems likely that rather than there being a standardised norm, there may be a distributional pattern parallel to that in Australia, as described by G.W. Turner[12]:

> "There is in Australia not so much a single speech variety as a cline or gradation of ways of speaking with speech fairly close to the received pronunciation of Southern England at one end of the cline and a markedly regional variation at the other. To simplify, it is convenient to isolate the extremes and talk of Educated Australian (since often, though not always, the type of speech nearer to R.P. is used by academic and professional people, and

spreads from them) and Broad Australian."

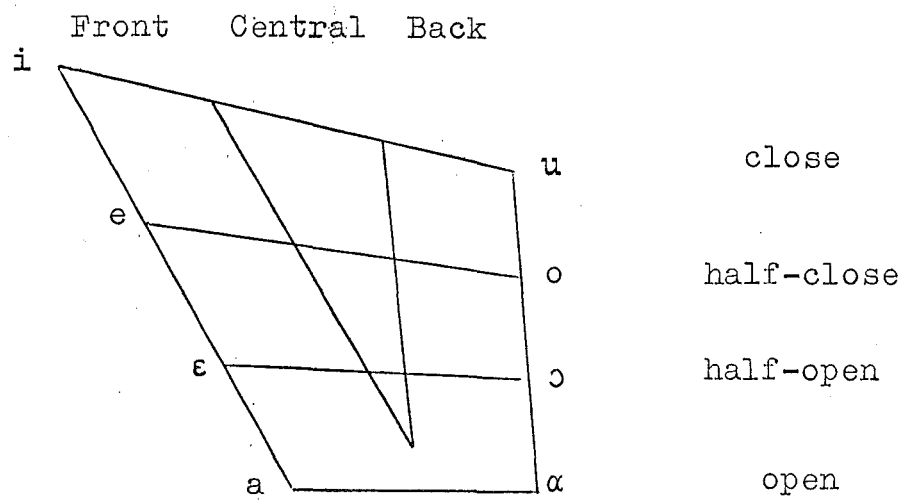
The speakers of the 'educated' variety of the language probably refer to R.P. when the need for a norm arises, as happens in Australia[13]. The form referred to by Wall and Turner simply as New Zealand English is most likely that of a standardised version of the regional variety, i.e. "Broad New Zealand". It is the pattern one would expect to encounter in a number of New Zealanders, but it must be appreciated that by no means all speak with this "accent" and the range or cline is likely to be between this form and R.P.

The Cardinal Vowel System

In order to classify vowels, it is helpful to be able to see them in relation to the cardinal vowel system devised by Daniel Jones. Details on the principles behind this, and the method of arriving at the eighteen cardinal vowels (which were recorded on a gramaphone record for reference purposes) may be found in Jones' book, An Outline of English Phonetics[14] or in Gimson[15]. Basically the vowels are classified according to the position of the tongue and lips when producing them. The latter may be 'rounded' or 'spread'; the tongue position is plotted on a conventionalised diagram which shows the relationships between vowels. Recent acoustic analysis has produced

charts which have been found to be very similar to those produced by physiological classification[16,17].

The eight primary cardinal vowels are plotted below, the dots representing the highest point of the tongue.



The 8 primary Cardinal Vowels plotted on the conventionalised diagram.

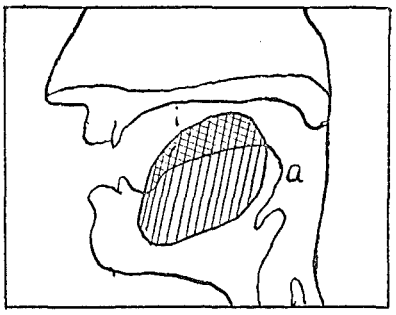


Diagram showing the approximate tongue-positions of the Cardinal Vowels i and ɑ

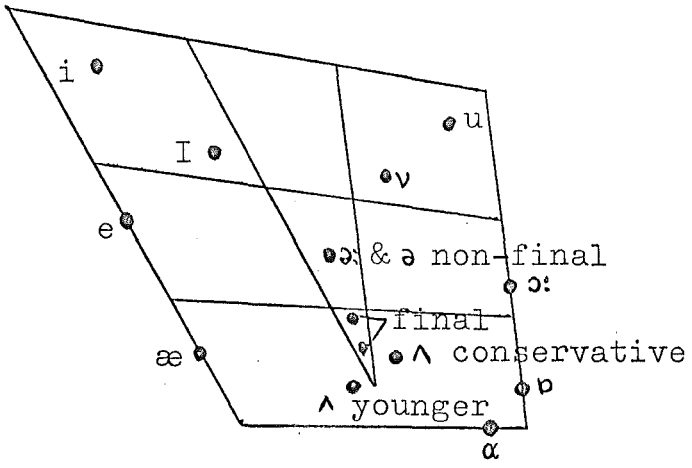
The degrees of 'closeness' and 'openness' for the cardinal vowels are defined as follows[18]. Close vowels are those in which the tongue is raised as high as

possible consistently with the sounds remaining vowels. Open vowels are those in which the tongue is as low as possible; half-close vowels are those in which the tongue occupies a position about one-third of the distance from 'close' to 'open'; and half-open vowels are those in which the tongue occupies a position about two-thirds of the distance from close to open.

Front vowels are those in which the main raising is made by the front of the tongue towards the hard palate; back vowels are those in which the back of the tongue is raised towards the soft palate; those in which the centre is raised towards the juncture of the hard and soft palates are called central vowels.

The Vowels of R.P.

Since the cardinal vowel system is an unchanging reference scale, the vowels of any language may be described in relation to it. The normative realisations of the vowels of R.P. , given by Gimson, are shown on the conventionalised diagram thus:



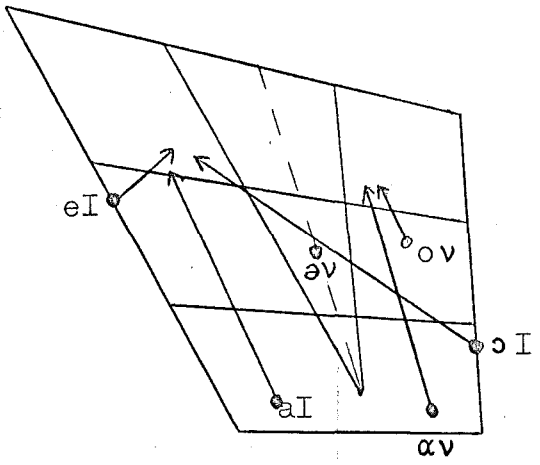
Key words - R.P. pronunciation

i	peat	u:	too
I	pit	ʊ	put
e	pet	ə	non final ə oblique
æ	pat	ɜ:	bird
ʌ	but	ɔ:	port
		ə	final ə. doctor.
		ɒ	not
		ɑ	part

The cardinal vowels (and those above) are, however, so-called "pure vowels", i.e. the organs of speech are relatively unchanging for the duration, whilst R.P. contains a number of vowels which have a considerable glide - the 'diphthongs'. These are shown by an arrow indicating the quality of the starting point and the direction of the glide.

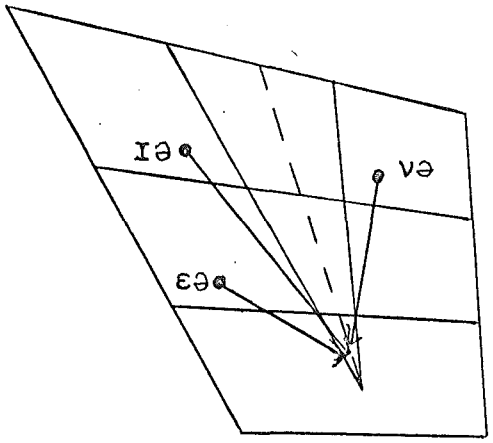
The Diphthongs of R.P.

a) Closing Diphthongs



	Key words
eɪ	late
aɪ	light
ɔɪ	boy
əʊ	soap
oʊ	conservative
ɑʊ	sound

b) The centring Diphthongs

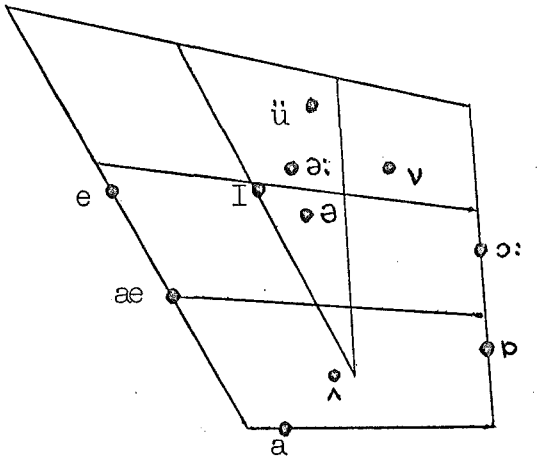


	Key words
ɪə	dear
ɛə	care
ʊə	poor

Both pure vowels and diphthongs have many variants, even within R.P., and it must be remembered that those shown are merely those that are most 'general' according to Professor Gimson.

The New Zealand Vowel System

No work setting out phonetic details of the New Zealand pronunciation of English has yet been published. However, G.W. Turner's comments on the realisation of New Zealand phonemes compared with those of R.P. allow the construction of a chart which should at least be more relevant to New Zealand pronunciation than is R.P. Where the Australian variant is given with no remark on any New Zealand variant, the former will be shown on the chart.

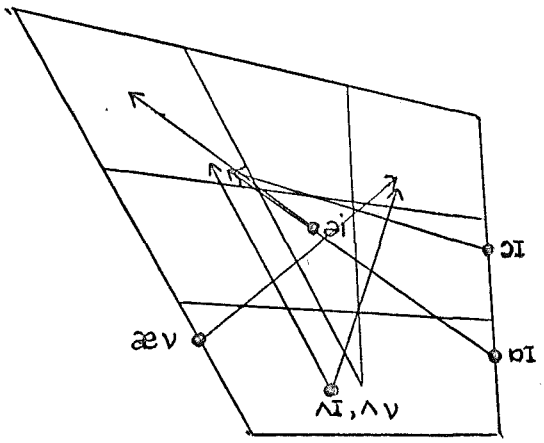


Key Word	R.P.	New Zealand
peat	[i]	[əi](see diphthongs)
pit	[I]	somewhat centralised to approach the vowel [ə].
pet	[e]	Australian: closer than R.P. often very near cardinal [e].
pat	[æ]	ɛ(ə) - alps. closer, about cardinal [ɛ.]
part	[ɑ]	[a]forward of the English. Nearer to cardinal [a].

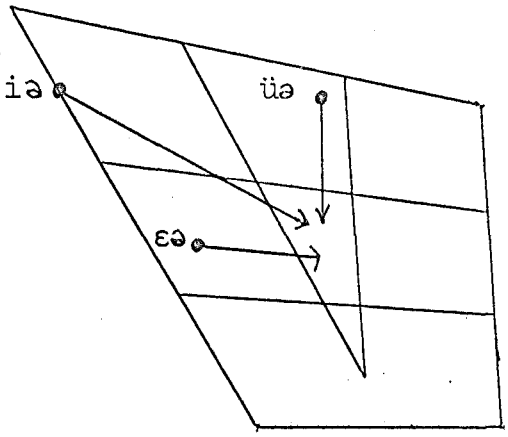
Key Word	R.P.	New Zealand
but	[ʌ]	Australian - "the sound given by A.C. Gimson as used by younger people in London".
not	[ɒ]	Australian - "a little closer than the R.P. sound".
port	[ɔ:]	Australian. Slightly closer in Australian, perhaps a little more forward and rounded, too.
put	[ʊ]	"This does not seem to differ between the varieties."
bird	[ə:]	"Higher and more rounded than the English."
about	[ə]	Australian: a little below ½-close.
too	[u:]	New Zealand: a monophthongal centralised /u:/ is common, sometimes with hardly more rounding than the slightly rounded New Zealand version of [ə:].

The New Zealand Diphthongs

a) Closing



b) Centring



Key Word	R.P.	New Zealand	
peat	[i]	[əi]	A fully front termination with short first element is often heard in New Zealand
mate	[eI]	[ʌI]	Australian
high	[ɑI]	[ɒI]	sometimes a pure long monophthong [ɒ:] - Christchurch > [krɒ:stʃtʃə:tʃ]
boy	[ɔI]		- generally a closer pronunciation (Australian)
go	[oʊ]	[ʌʊ]	Australian
dear	[Iə]	[iə]	sometimes [Iə], with centralised first element, sometimes monophthongal [I:], the [I] being a front allophone.
there	[ɛə]		the first element may be very close in N.Z. Sometimes a monophthong.
sure	[ʊə]		two pronunciations: [ɔ:], and (New Zealand) centralised [ü] followed by [ə]
house	[aʊ]	[æʊ]	Australian

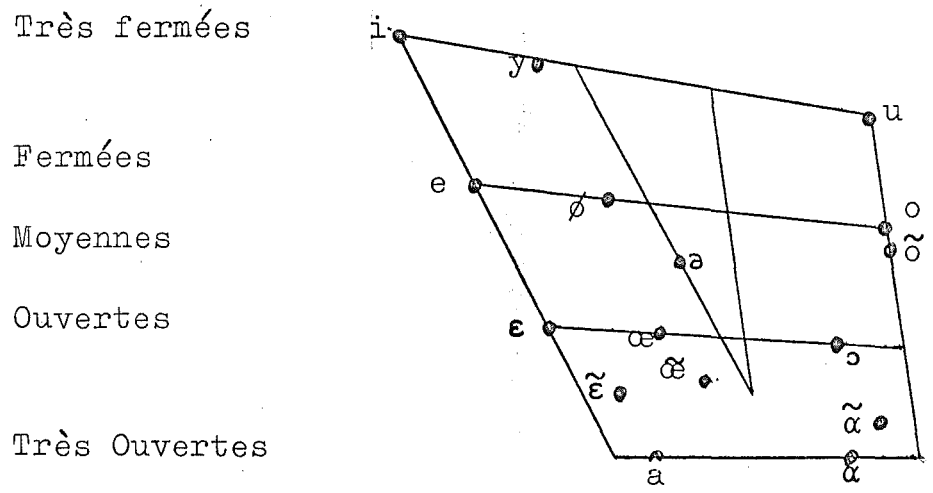
It is again brought to the reader's attention that the above diagrams are by no means absolute, representing only one variety of New Zealand English. However, this variety is prevalent enough to have been considered representative of New Zealand pronunciation by Wall and Turner and the differences between this and R.P. are large enough

to justify its inclusion as an attempt to have a more accurate basis for comparison.

The French Vowel System

All sources consulted[19] showed slight variations in their manner of classification of the French vowel system and in the positions of /y/ /ø/ /œ/ /a/ and /ɑ/. The diagram below is in conventionalised form, for comparative purposes, but is based on the chart given by Monique and Pierre Léon[20], former lecturers in phonetics at the Sorbonne and the University of Besançon. Their chart is very similar to that of Pierre Delattre, obtained by acoustic analysis[21]

Lip Position:French



i, e, ɛ, a are front unrounded vowels

y, ø, ə, œ are front rounded vowels.

u, o, ɔ , ɑ are back rounded vowels.

There are of course many varieties of French, on the one hand regional, social and educational, and on the other due to the type of conversation or discourse.

The above are the norms for "français standard", the usual base for teaching of the French language. It is defined as "la prononciation en usage dans une conversation soignée chez les Parisiens cultivés "[22], that is, the kind of speech which is typical of educated people engaged in formal conversation, as opposed to both familiar conversation and public speaking.

Interference and Error Types

A rapid comparison of the French and New Zealand vowel systems reveals several startling differences. The French system has twelve "pure" vowels, the New Zealand system eleven or twelve, but only three of these are in approximately the same position as French vowels. French has four nasal vowels, English none; French has no diphthongs; the speaker of broad New Zealand English may use up to ten, but only one of these (iə) has a starting point closer to a French vowel than to a New Zealand one. In addition, French tends to have a greater degree of lip-rounding, tenseness and other general features noted at the beginning of this chapter.

Error types resulting from the interference of the native language upon the learning of the Target language have already been described on a general level (Chapter I). Errors were found to be of four main types: phonetic, phonemic, distributional and spelling-influenced. On the specific level, viz. the interference of New Zealand speech habits on the learning of French, two of these error types, phonetic and phonemic may be predicted from a direct comparison of the vocalic and consonantal systems of each. The vocalic systems have been presented above; New Zealand consonants are largely the same as those of R.P.[23] and most of these in turn have been considered acceptable substitutes for French consonants, especially at an elementary level. Any exceptions to this generalization will be discussed specifically.

I. Phonemic Errors

The reader is reminded that these occur when the Target language has a phoneme which does not exist in the native language, and the learner substitutes some other phoneme or combination of phonemes, producing a different word from that intended. Errors of this type are likely to occur with the following:

a) the oral vowels (i)/y/, (ii)/u/ — The nearest N.Z. phoneme to both of these is the centralised monophthong/ü/

b) the nasal vowels, /ɛ̃/, /œ̃/, /ɑ̃/, /ɔ̃/.

The nasalisation of vowels is not phonemic in English, occurring only sometimes before or after nasal consonants (n, m, or ŋ). An oral or slightly nasalised vowel + nasal consonant is a likely substitute for a nasal vowel.

c) the semi-consonant /ɥ/. The nearest approximation to this in English is /w/.

d) the consonant /ɲ/. The English sound most similar to this is the combination /j/ + /n/ as in "onion".

A refinement of this type occurs when the Target language makes a phonemic distinction which is not phonemic in the native language. Phoneme pairs of this type are:

a) Oral vowels: (i) /a/ } New Zealanders use a front open
/ɑ/ } vowel [a] where R.P. has a back vowel [ɑ], but neither makes a phonemic distinction between the two.

(ii) /ø/ } While the New Zealand [ə:] phone,
/œ/ } being higher and more rounded than the R.P. phone is reasonably close to the French phoneme /ø/, there is no phonemic contrast of the type /ø:/ /œ/ in either R.P. or English.

(iii) In addition to the fact that there are no English phonemes equivalent to either /u/ or /y/ (as above) another potential source of error is that

there is no phonemic contrast of this nature either, and the one sound nearest to these phonemes (in New Zealand, /ü/ is likely to be used for both.

b) Nasal vowels. (i) The nasal vowels are distinguished among themselves.

(ii) The substitution of the combination oral vowel + nasal consonant is likely to arise because it is the nearest English equivalent to a nasal vowel (as above). The same combination could also be caused by a different factor, the fact that no phonemic distinction of the type oral vowel + nasal consonant:nasal vowel, e.g. /ɑn:ɑ̃/ exists in English, and the two phonemes are likely to be considered identical.

To recapitulate, French phonemes or phonemic contrasts likely to cause difficulty because of their non-existence in New Zealand English, and therefore considered for inclusion in this study are:

a) Oral vowels: (i) y:u

(ii) a:ɑ

(iii) ø:œ

b) Nasal vowels:(i) Nasal vowel:oral vowel + nasal consonant

(ii) ɛ̃:œ̃:ɑ̃:õ.

c) Semi-consonant : ɥ

d) Consonant : ɲ

However, the relative importance of each of these phonemes and distinctions in the French language must be considered before it can be determined whether or not to retain them in the design. To assess this, a number of recent[24] authorities were consulted and the opinion of the majority ascertained. The frequency of use of each phoneme under discussion is given as a percentage of all phonemes, according to the figures compiled by Laton, 1960[25]. The maximum is 8.1 for /a/ and the minimum 0.1 for /ɲ/.

1. /y/ du F = 2.
   /u/ doux F = 2.7

This distinction is retained - both are "voyelles avec un seul timbre". Léon (P.F.S.[26]): elles ... sont bien differenciées. Elles servent à distinguer de nombreux mots, p.26.

Fouché: unquestioned distinction.

Martinet: " " " " "

Both have a reasonable and fairly similar frequency of occurrence.

2. /a/ patte F = 8.1
   /ɑ/ pâte F = 0.2

Not retained, since they are interchanged often, and "/ɑ/ postérieur" is often replaced by "/a/ antérieur".

Léon (P.F.S.): 95% of 'a's are front, and the distinction is phonemically significant for only a few words in isolated context. c.f./e/, /ɛ/ pp. 64,66.

Fouché: la répartition de /a/, /ɑ/ dans le français correct d'aujourd'hui est assez délicate à établir. p.56. Hésitations - pp. 57-63, pp. 84-90.

Martinet: reports a certain amount of fluctuation, especially in final syllable. But with patte, pâte - there is almost universal distinction. pp. 70-82.

Léon: (I.P.C.) La distinction entre les deux "a" tend à disparaître au profit du seul 'a' antérieur; l'opposition de ces deux voyelles n'a plus guère de valeur linguistique en dehors de quelques mots comme patte et pâte. p.13.

Dutton: reports a wide variety of practice as to the distribution of these two vowels. p.34. Even those who regularly make the /ɑ/ sound are in disagreement as to the words in which it occurs. It should also be noted that usage may vary even within the same individual.

Politzer: The distinction between /a/ and /ɑ/ is of little 'use' in the language and is being dropped by some Frenchmen. p.95.

The frequency of occurrence of /a/ is the highest of all phonemes, that of /ɑ/ the lowest but one.

3. /œ/ veulent F = 0.6

/ø/ veule F = 0.5

Not retained, as the distinctions are narrow and changing, and of little linguistic value.

Léon: (P.F.S.) "Deux^EU sur trois sont des /ø/ fermées en français standard." These are determined by distribution.

Syllabe accentuée: il existe quelques oppositions directes, e.g., veule /vø:l/:veulent /vœl/. Les seuls cas où /ø/ et /œ/ sont opposés phonémiquement se trouvent en syllabe fermée par n ou l. Ces cas sont très rares. L'opposition linguistique /ø/-/œ/ n'est pas d'un bon rendement. p. 53,54.

Syllabe inaccentuée: en français standard, en position inaccentuée, /ø/ n'est jamais opposé à /œ/ pour distinguer des mots de sens différent. Donc la distinction de timbre est beaucoup moins nette. Hésitations entre les deux pronunciations.

jeudi - /ʒødi/ ou /ʒœdi/

souvent - un timbre intermédiare.

Fouché: Does not mention hesitations, either for accented or unaccented syllables. pp 54-56, 80-83.

Martinet: the use of /ø/ or /œ/ is much more determined by the context than for /e/ or /o/ e.g. final, closed, and the influence of consonants.

Il y a donc en français un embryon de distinction phonologique entre les deux timbres de EU, mais il n'est pas vraisemblable que le rendement fonctionnel de l'opposition des deux prenne jamais une extension quelconque, car EU est relativement peu répandu dans le lexique français, une fois mis à part les mots à suffixes -eur et -euse. pp. 130-140.

4. Nasal vowels.

/$\tilde{\alpha}$/ F = 3.3

/$\tilde{o}$/ F = 2

/$\tilde{\varepsilon}$/ F = 1.4

/$\tilde{\text{œ}}$/ F = 0.5

/$\tilde{\alpha}$/and/$\tilde{o}$/retained. Although the distinctions between /$\tilde{\alpha}$/, /$\tilde{o}$/ and /$\tilde{\varepsilon}$/ are all phonemically important, the inclusion of two nasal vowels should be sufficient to show the tendencies of New Zealanders in their realisation of nasal phonemes. /$\tilde{\alpha}$/ and /$\tilde{o}$/ have higher frequencies of occurrence than /$\tilde{\varepsilon}$/, /$\tilde{\text{œ}}$/ or the two combined, and were thus the two selected for inclusion.

Léon: (P.F.S.) Les trois voyelles nasales /$\tilde{\varepsilon}$/, /$\tilde{\alpha}$/, /$\tilde{o}$/ peuvent s'imposer entre elles pour distinguer de nombreux mots: impair - Ampère - on perd. Le rendement donc de toutes ces oppositions est très important. La seule opposition qui ne soit pas importante est celle de /$\tilde{\text{œ}}$/ et /$\tilde{\varepsilon}$/ puisque /$\tilde{\text{œ}}$/ est

remplacé de plus en plus par /ɛ̃/. p 42.

/ɑ̃/:/ɔ̃/

Batt: Care must be taken to distinguish these two vowels clearly, e.g. dont - dans. p.41.

Dutton: These two nasal vowels should be carefully distinguished. Note the closeness of /ɔ̃/ in particular.

/œ̃/:/ɛ̃/

Batt and Dutton acknowledge the tendency of French speakers not to distinguish between these two nasal vowels, but advise the learner not to imitate them. (p.39 B. p.54 D.)

However, Léon (above) doubts the importance of the distinction, and Martinet found that 60% of his Parisian subjects either confused the two or had a tendency to do so. p.149. Politzer also makes this point. p.95. Thus it does not seem that the distinction is of prime importance for the French beginner.

5. Oral + nasal consonant:nasal (vowel)

Retained, as the distinction is an important one.

Léon: Dans les substantifs, /ɑ̃/ s'oppose à /an/ pour distinguer les formes du masculin et du féminin dans les mots du type Jean-Jeanne, paysan, paysanne, p.40.
La voyelle /ɔ̃/ s'oppose au groupe /ɔn/ pour distinguer quelques mots tels que son/sonne. p.41.

Martinet: Les voyelles nasales sont incontestablement en français normal des phonèmes indépendants, et ne sauraient aucunement être interprétés comme des groupes de phonèmes voyelle orale + consonne nasale. pp. 143-144.

Politzer notes the difference between an and Anne, Jean and Jeanne, the vowel before the nasal consonant not being nasalised - cp too, English "down", "ample", where it is.

Politzer and Hagiwara: "A French nasal vowel is not a nasalised vowel followed by a nasal consonant." p.xiii.

Fouché: Devant une occlusive les voyelles nasales françaises ne développent pas après elle un embryon de consonne nasale. p.xviii.

6. Semi-Consonant /ɥ/ F = 0.7

Not included in design, as the vowel /y/ may be substituted for it.

Leon: (I.P.C.) Au stade des débutants, on peut toujours tolérer la voyelle correspondant à la semi-consonne. (/y/ for /ɥ/). p.39.

7. Consonant /ɲ/ F = 0.1

Not included as a phonemic problem, as the substitution of /n/ + /j/ (which exists in English - onion) occurs even in French.

Léon: Il arrive que [ɲ] soit remplacé par [nj] et qu'on entende, pour agneau [anjo] au lieu de [aɲo]. Il n'y a pas de mots en français standard qui puissent être distinguées par l'opposition /ɲ/-/nj/ en dehors du couple peignez - peiniez.

Martinet: La confusion de /ɲ/ et de /nj/ semble bien attestée ... Les tendances sont extrêmement nettes et confirment pleinement l'affirmation de M. Grammont que la confusion gagne du terrain tous les jours. p.173.

In summary, those phonemes retained under this heading are: /u/. /y/. /$\tilde{\alpha}$/. /$\tilde{o}$/.

II. Phonetic Errors

We have defined these as occurring when the target language has a phoneme which corresponds to but is phonetically different from a phoneme in the native language, which the learner consistently uses. The result of such errors is sometimes incomprehensibility, although more often it sounds very foreign and offensive to the French ear.

The most obvious of these is the likely substitution of English or New Zealand diphthongs for French pure vowels.

French	R.P.	N.Z.	
/i/ si	(/i:/)	/əi/	see
/e/ ses	(/eI/)	/ʌI/	say
/o/ dos	(/oʊ/)	/ʌʊ/	doe

/u/ doux (/u:/) /ʉ/ Aust. /əu/ do

Since the New Zealand diphthongs even have different starting points from the French pure vowels, their use could lead to greater difficulties in comprehensibility than occur with the diphthongs of R.P.

Another phonetic difference is that between the English and French 'open o' phones, the French being considerably more forward, and a little closer than the N.Z. phone. This difference in itself is not of great consequence; however, if it affects the maintenance of the phonemic contrast ɔ:o, it is of considerably more importance.

In R.P. There is no opposition between front pure vowels of the type e/ɛ, as in French, and the nearest R.P. phones are different from both the French ones. However, the Broad Australian /e/ and the N.Z. /æ/ as described are very close to the French phones, /e/ and /ɛ/ respectively, so that it is possible that New Zealanders would make fewer errors resulting from phonetic differences in the two languages than would speakers of R.P., although the influence of the diphthong [ʌɪ] (from R.P. [eɪ]) is unknown.

Of the consonants, the only phoneme which is extremely different phonetically in the two languages is, of course /r/, which is uvular in standard French, and in

some districts trilled, whereas in English it is mostly a post-alveolar frictionless continuant, although possessing many variants.

Recapitulation: Vowels: a) Diphthong substitution (i) i
(ii) e
(iii) o
(iv) u

b) Contrasts (i) o : ɔ
(ii) e : ɛ

Consonant: R

The question arises once more, of which phonemes to retain for study.

a) Diphthongs: These were retained, as the pure nature of these vowels in French is stressed in pronunciation books, usually with special reference to the opposite tendency operating in English.

Delattre has made a detailed comparison of four American vowels, /i,/e,/o,/u/, and the corresponding French vowels, which clearly shows the diphthongal nature of the American, and the pure nature of the French. (p.95).

Politzer (p.97) and Politzer and Hagiwara (p.xiii, xiv) make the same point.

Rigault: [e]: "il faut éviter de diphtonguer ces voyelles (e:ɛ) /e/ en particulier, et ne pas prononcer chez [ʃeI]", p.195.

[o]: "éviter la prononciation [ou] ou [əo]. La voyelle [o] ne doit pas changer de timbre quand on la prononce." p.216.

Dutton and Batt are both concerned to a certain extent with the particular problems of Australian students, although they mainly present a general consideration of pronunciation.

Dutton: /i/: "The English speaking learner should not substitute the English "ee" sound. French "i" is a pure vowel, "ee" a diphthong." p.46.

/u/: "The English speaking learner should not substitute the English diphthong in "school", "tour". Writer's note - probably the Australian [uə]. French /u/ is a pure vowel." p.48.

/o/: "This is a pure vowel, whereas the nearest English equivalents are all diphthongs, their exact quality depending on the broadness of one's accent." p.41.

/e/:"Care should be taken not to substitute the 'ay' of 'day' for this sound. [e] is a pure vowel, 'ay' a diphthong, (especially marked in Australian speech)." p.38.

"The avoidance of diphthongisation in French is one of the most important lessons to be learned by the English speaking student." p.19.

(no page 57)

Batt makes the same points. With respect to [e], she adds "The average Australian student, whose vowels are less tense than standard English vowels, naturally tends to exaggerate this error." p.48.

b)(i)./o/ saute

/ɔ/ sotte

Retained, as the majority of opinions consulted seemed to indicate that a meaningful distinction is made between the two sounds in a reasonably large number of cases, and certainly more than in the cases of those phonemic distinctions not retained.

Leon: P.C.S. "C'est seulement en syllabe fermée que l'opposition /o/:/ɔ/ sert à distinguer des mots de structure identique comme rauque:roc." p.59, also p.61.

Fouché: Hesitations between /o/ and /ɔ/ mentioned on pp 53, 76, no other qualifications.

Martinet: "Cette distinction repose sur des différences phonétiques nettes, généralement mieux caractérisées que celles qui permettent de distinguer a antérieur de a postérieur. Ces deux timbres d'o correspondent chez la plupart des sujets non-méridionaux aux deux espèces phonologigues distinctes. ... S'il existe beaucoup de flottements pour l'o pre-tonique, la répartition des deux timbres en syllabe finale n'offre pas d'autant d'incertitudes que celle des deux a dans

la même situation." p.82.

"... Pour Paris/l'ensemble de la Fnm*, 98%/90% des sujets ont declaré faire, entre sotte et saute, une différence de timbre; 54%/62% ont declaré faire une différence de longueur; 96% distinguent entre les deux mots ... (p.82.)

Pour la majorité des Français, c'est la distinction de timbre qui, ici, s'impose au premier chef." p.91.

Dutton and Batt do not question the distinction.

(ii) /ɛ/ travaillait

/e/ travaillé (in the same phonemic context).

It was decided not to include this distinction, since in practice it is often not made.

Fouché: it remains in "la langue soignée", but is almost dropped in "la langue courante", being replaced by /ɛ/. (pp. 50, 65, 66).

Léon: (P.F.S.) only in an accented syllable is this distinction phonemically significant, and that for only a few words in isolated context. p.48.

Martinet: By no means a certain distinction. pp. 114-126.

c) /R/ uvular r.

Dutton: "This is the most frequently used r-sound heard in France and one which it is particularly important for the learner to master. The "lingual trilled /r/"

*France non-méridionale.

produced with the tip of the tongue as in Italian is heard in France nowadays only in the provinces and in classical singing. In Paris and other large towns, any other r-sound is unusual among educated people and is therefore not to be recommended to the foreign learner. Particular care should be taken to pronounce /R/ within and at the end of words where no r-sound would be heard in English." p.62.

Batt: "The so-called trilled or tongue-point r used to be the only one admitted by the Conservatoire de Musique et Déclamation, and it is still heard on the stage of the Comédie Française.

But the characteristic Parisian sound is the uvular r and this is the one accepted and taught nowadays. Although the uvular R has displaced the older trilled r in Paris and other large towns, the latter is still used in the South and in many regions of France." p.83.

Léon (I.P.C.): "La correction du r pose souvent des problèmes." ... r "roulé" can be tolerated at first, then later corrected.

Alveolar r is to be corrected at once.

"Le r du français standard est uvulaire." p.35

Fouché: "Quant à l'r anglais, il ne peut etre utilisé en français."

Summary: phonemes retained: /i/, /e/, /o/, /u/, /ɔ:o/ R/.

III. Distributional Errors

These occur when the student encounters a sound with which he is familiar, in a position unfamiliar to him.

1. /ʒ/. In French the phoneme /ʒ/ occurs word initially, (e.g. Jean), whereas in English it occurs only medially, (pleasure) and finally (beige). It does, however, occur in syllable-initial position, and may not present a great problem.

Leon (I.P.C.): Quand un Anglais apprend le français il a tendance à remplacer le /ʒ/ initial par le seul son voisin qu'il connaît dans cette position, le son [dʒ]. p.43.

2. The phoneme /j/ (yod) occurs word finally in French (travaille). In English it never occurs in this position, c.f. yes, due, failure. Thus word final yod is likely to cause difficulty.

Leon I.P.C.: "Au Stade des débutants, (niveau phonémique) on peut toujours tolérer la voyelle correspondant à la semiconsonne, i pour yod, (sauf en finale) ..." p.39.

"Le yod est susceptible d'apparaître à la finale où il peut s'opposer a i." p.46.

"La position finale du yod français s'oppose aux finales diphtonguées de langues comme l'anglais, l'allemand, le vietnamien... Un sujet parlant de ces groupes linguistiques interprétera la finale [aj] du français comme la finale diphtonguée de l'anglais

pie [paI] alors qu'il y a en français une finale vocalique [a] , ici, suivie d'un phonème différent, la semi-consonne yod." p.47.

Batt: Where 'yod' is final, many people tend either to omit the sound as in pareil (parɛ) or to substitute a short /i/, as in rail /rɑi/. p.65.

Summary: Phonemes in this category: initial /ʒ/
final yod [j]

IV. Spelling influenced errors

These may be of two closely related types:

A. The native language possesses a phoneme which does not exist in the target language but which the learner associates with a certain letter or letter sequence which does occur. French does not possess the following consonantal phonemes:

1. /θ/ or /ð/ occurring in English with the spelling 'th'
2. /dʒ/ occurring in English often with the spelling j or g.
3. /tʃ/ occurring in English often with the spelling ch, -tion.

In French, th is used for /t/.				French	thé,	cf Engl.	the
					thème	" "	theme
"	"	j,g are	"	" /ʒ/	" "	Jean	" " Jean
					général	"	general

In French ch is used for /ʃ/ - French cher cf Engl. chair
" " ti " " /tj/ " " question " question

B. A letter or letter sequence is used to represent a quite different phoneme in the Target language, from that in the native language. This list is not comprehensive but includes those suggested by Politzer[27] and some which the researcher had observed.

eu	is used for	/ø,œ/	in French	feu	c.f.	English	feud
				neuf	"	"	"	neutral
qu	" "	"	/k/	" "	quand	"	"	"	quail
ti,si	" "	/s/	"	"	nation	"	"	"	nation
x	" "	"	/s/	"	"	dix	"	"	"	dixie
l	" "	"	/j/	"	"	travail	"	"	"	travail
gn	" "	"	/ɲ/*	"	"	agneau	"	"	"	Agnes

(initial) h has no sound value in French homme c.f. Engl. home
final consonants t,s,d,x have no sound value, e.g. French

		vert	c.f. English	Bert
queue	/kø/		c.f. English	/kju/

Queue was added as a word containing two potential spelling influenced errors and possessing an English cognate. The writer was interested to see if any pattern emerged.

In addition, phonemes included in other categories are likely to be subject to the same influence, e.g. short

* or /nj/

/I/ and /ʏ/, which do not exist in French, may occur as variants of /i/ and /u/ because of spelling.

SUMMARY

Phonemes to be included in design, categorised according to the potential source of error:

I. Phonemic

/u/, /y/, /$\tilde{\alpha}$/, /$\tilde{\text{ɔ}}$/

II. Phonetic

/i/,/e/,/o/,/ʊ/,/ɔ:o/,/R/

III. Distributional

/ʒ/. /j/

IV. Spelling influenced.

th; j,g; ch; ti; eu, qu, x, l, gn, initial h, final t,s,d,x, the word 'queue'.

CHAPTER III

DESIGN

The aim of this study was to consider some aspects of oral production of French by third formers:

a) as a whole

b) according to whether the pupils had

(i) been taught by the Audio-Lingual (AL) method, or traditional grammar/translation methods,

(ii) been given French at Intermediate School.

It is noted at this point, although it was not discovered until later, that there may be vast differences between the 'Audio-Lingual Method' as practised by individual teachers. However, for this study, if a school considered it taught the Audio-Lingual method, it was classified as such. Intermediate experience can also vary; the criteria for selection here were "French twice or more a week", and "No French at all " for the "experienced" and "inexperienced" groups respectively. Thus pupils with French only once a week were excluded. The design may be diagrammed thus.

METHOD / EXPERIENCE	AUDIO-LINGUAL	TRAD.
YES		
NO		

Control of intervening variables

Since the study included ascertaining differences (if any) in the pronunciation of pupils taught by different methods, it was necessary, in the research design, to control for any intervening variables which might misrepresent the situation.

Pupils of foreign parentage, or who had lived in France, were excluded from the population since their pronunciation was likely to differ from that of the majority of pupils. To minimise the effects of varying intelligence, it was decided to restrict the population to those with an "IQ" of 100 or more. While it is admitted that "IQ" tests vary, and that "IQ"s can never be considered as absolutes[1], a lower limit seemed the simplest and most realistic way of restriction. Those who continue with French are those whose pronunciation is most relevant to this study, and as "all aspects of language ability tend to be positively correlated with scores in intelligence tests",[2] it was

thought appropriate for the restriction to be imposed this way rather than any other. Thus the population was restricted to those who had scored 100 or more as an "IQ" in the 1968 entrance tests for their High Schools.

All recording was to be done within 2-3 weeks, near the end of the 3rd term 1969, by which time, it was reasoned, all pupils would have had the same amount (viz., one school year) of secondary school French, but would not yet be disrupted by preparations for the end of year ceremonies. The subjects would be randomly sampled from a population of third formers, restricted as defined above, from six systematically selected Christchurch schools (see confidential appendix) which were thought to be representative of a cross-section of all schools, and comprising three matched pairs. (Three of each method.) The approximate distribution of pupils with Intermediate experience of French was at this stage unknown, but informal inquiries had indicated that numbers would be sufficient to undertake the study.

It was also intended to control for the variable of teacher's pronunciation by assigning them to two groups according to a number of specified criteria regarding pronunciation of French. To enable the teacher's pronunciation to be recorded under as natural circumstances as possible, four questions to be asked by the teacher but answered by

the pupil, were included in the design. These contained a variety of phonemes, and intonation patterns generally different from English. Their actual content fitted the context, and if answered, would have provided useful information on the pupils: name, age, school and the length of time French had been studied. The actual questions were:

"Comment vous appelez-vous?"

"Quel âge avez-vous?"

"A quelle école/quel lycée allez-vous?"

"Depuis combien de temps étudiez-vous le français?"

In fact, this grouping did not take place. A more detailed treatment of the subject and the reasons for deciding not to divide teachers in this way is given as an appendix.

The Sentences

The aim, then, was to study the pronunciation of a certain number of phonemes (detailed in the last chapter) by a sample of third form pupils. The method of gathering data had now to be determined. As there were comparisons involved, and the results were to be generalised from, it was essential to have rigidly controlled standardised procedures, which would also allow repetition of the study. These are all characteristics of the experimental method, as used in psychological and social research and that of

related disciplines (e.g. linguistics). This method may be used for either descriptive or evaluative purposes.

A reliable and valid procedure was necessary, which would elicit the desired responses from all subjects. "The general procedure to test production of the sound segments is to stimulate the student to produce utterances that contain the pronunciation problems and to score the responses"[3]. The problem was, however, to find a "reliable and valid" test of oral production. W.A. Bennett[4] makes reference to this factor:

> "The hesitation in giving oral examinations a larger part to play in the total examination comes from the (tacitly) recognized unreliability of such examinations at present."

There are difficulties not only in scoring, but also in the manner of obtaining the responses to be scored. D.P. Harris and G.E. Perren in independent articles in Language Testing Symposium also refer to the lack of such tests[5]:

> "Satisfactory tests of spoken language are at present rare".

Perren also states:

> "as a result of serious attempts to construct objective tests of speech, only now are we becoming aware of the problems involved"[6],

and continues:

> "the most difficult problems arise when trying to construct tests of ability to speak a language"[7].

Techniques available

Lado and Perren both present similar ideas on techniques for eliciting oral responses from students. The free interview, Lado suggests, is "highly valid but impractical, since the student will not use all the sounds when we are ready for them, and will use some sounds with more frequency than we need or can handle effectively"[8]. Perren deems it "very attractive, but the problems of sampling and reliable scoring are almost insoluble unless a great deal of time and many standardised expert testers are available"[9]. It is more practical, in Lado's view, to elicit certain utterances that we know contain the problem we wish to test. He suggests three types of stimulus - verbal, pictures or written material, all of which are also put forward by Perren. By verbal stimuli, they mean oral questions, requests or statements to which the subject responds. The advantage of this type of stimulus is that the response represents normal use of the language. The disadvantage is that the stimulus may present comprehension problems and "does not always elicit either all the responses one wants or sufficiently uniform responses in many cases"[10].

A picture stimulus is also a very valid medium. The subject may be asked either fixed questions about them, or

to describe what is happening. He is likely to think he is being tested for grammar or vocabulary and uses a pronunciation that is more his usual one. Pictures alone, no matter how clear or well-planned they may be, are not practical, and some instructions must be given to the student, for example: "what do you see?", "what is he doing?" Even so, one cannot always be sure of eliciting the required response from every student, and pictures also have the disadvantage that not many critical phonemes can be included in the expected response to one picture. If a test of critical phonemes were to use picture stimuli, the number of items tested would have to be small, or the element of fatigue would soon be introduced. Lado also suggests translation and the completion of items as alternative stimuli. "Translation" he says, is a "valid and useful device", but "is limited by the fact that it is one of the most difficult things to do in a foreign language ... Students who might be able to pronounce a sound might fail because they do not know how to translate something". Completion of items, where the student supplies a missing word in a sentence, although effective, are, he says, difficult to write because there is always some possibility that a different word can be used in the blank space. Mimicry he dismisses as being only a "rudimentary check on pronunciation"[12].

Scherer and Wertheimer, however, included mimicry - called "echo responses"-in their battery of speaking tests. They too have found that "it is difficult to construct a well-rounded speaking test that does not depend in part on another skill" and continue "the only types of items that call for unadulterated speaking skills are those which avoid a stimulus in the target area. Thus, English directions telling the subject to imagine ... and relate will result in pure speaking performance. The device of giving the subject a picture to discuss in the foreign language also results in purity of performance. But if we want the student to echo sentences embodying certain critical phonemes, or if we engage him in directed dialogue, substitution exercises, tense changing and the like, ability in listening comprehension will be involved. Listening comprehension skill can be removed by providing a printed stimulus, but this device would simply substitute one contaminator, reading, for another. Speaking tests probably should also include an exercise in reading a text aloud, but here again, purity is impossible."[13] It may be noted that they do not seriously doubt the validity of mimicry, but point out that it is not a 'pure' test.

They also introduce the idea of a 'printed stimulus' reading, of which stimulus, Lado says:

> "The most uniform, precise and simple method of testing production of the sound segments of a language is to have the student read aloud the material you prepare for the test. The written material can be words, sentences or connected paragraphs. Every student produces the same sample of sounds of a language."[14]

A disadvantage of this method is that it introduces the factor of reading ability. Perren echoes this:

> "reading a passage aloud may display skill in pronunciation, but as a prerequisite assumes reading skills which may have no connection at all with speech."[15]

Lado also points out the additional extraneous factor contributed by "the effect of multiple spelling for one sound and multiple sounds for one spelling." However, he does not consider that its limitations eliminate reading as a testing device, they merely show that "there is, as yet, no ideal stimulus to test pronunciation on the production level". As mentioned above, he does in fact consider it the "most uniform, precise and simple method" and later adds " a reading technique will always permit the testing of any problem not tested otherwise."

Techniques used in other studies

The production test used in Keating's study of the effectiveness of language laboratories comprised two groups of ten items each[16]. The first group had a picture stimulus, appropriately labelled in English, to which the subject was to give a one-word response in French. The second section required the subject to read ten simple

French sentences with one key word in each. The shorter oral production test devised by Agard and Dunkel[17] consisted of three parts. The first and third parts used a picture stimulus, the second contained eight short sentences to be read aloud, each of which contained one or two pronunciation problems. Sarah Lorge[18] in her studies, tested speech by a sight-reading passage and by questions whose content did not present actual difficulty. Eugene J. Brière[19] had his students read sentences containing specific French phonemes being investigated. Scherer and Wertheimer[20] constructed four different batteries of speaking tests during their experiment, each semester modifying the form of the previous one in accordance with their experience with it. The final battery was in four parts. Part I required the reading of 15 sentences embodying critical phonemes. This replaced the "echo" type of the previous batteries, to save time during scoring - "one unavoidable impurity, listening, was exchanged for another, reading"[21]. Part II required the reading of a passage of about four lines. Part III was free response, on the basis of pictorial stimulus, and part IV was "directed utterances" of various types, e.g. asking a specific question, tense changing or changing sentences from direct to indirect speech. Scherer and Wertheimer are satisfied that "speaking, as assessed by the tests used, was indeed a separable skill in the present study". Since two out of

four parts involved reading, it seems likely that any distortions introduced by reading are not too great to preclude its use.

This Study

Reading of sentences embodying chosen phonemes was decided upon as the medium for this study; its disadvantages are not much greater than for most other stimuli, and it has the advantages of providing standard material, being simple to administer, and relatively easy for the researcher to handle. Mastery of a sound system progresses in a fluctuating manner, so that a student may sometimes pronounce a sound satisfactorily in one word, but not in another which seems no more difficult, "and in fact he may pronounce a sound well in a word and miss it in another occurrence of the same word"[22]. Also, in general, it is not sound methodology to generalise from a sample of one. Thus several items centred on the same problem were to be included in the sentences.

The "test" was to take the form of about 10-15 short and easy sentences, to last about 3½ minutes when read. This time was selected because it is a reasonable concentration span for children of this age engaged in this type of topic where the variable of fatigue soon emerges. The number and length of the sentences were designed so as not

to disconcert the pupil by a long list of short or long sentences, or even a short list of long sentences.

Factors considered when formulating the sentences may be presented as follows:

1. Range of Vocabulary: "The words or phrases chosen for a pronunciation test must be within the active vocabulary of the students, or the students will not be able to use them."[23] As different schools and methods use different text-books, the vocabulary known to the whole population under study could not be estimated by a subjective means, and an objective criterion had to be found. Le Français élémentaire , a book drawn up by a special commission in 1951 by the French Ministry of Education, using both frequency and utility of words in spoken language for criteria of selection, contains a basic vocabulary which is considered by the authors to be a first stage on the way to a full command of the language. It was thought by the researcher that the vocabulary range presented in this book was likely to be similar to that included in text-books for the teaching of French at an elementary level, and all words in the sentences were chosen from it.

2. Number of sentences: Too many sentences would (a) disconcert the pupil, which would adversely affect his performance, and (b) be more likely to introduce the element of fatigue, which also interferes with performance. 'Too few

would not expose the phonemes a sufficient number of times. Ten to fifteen seemed a range likely to meet these requirements.

3. Length of Sentences: As pupils at third form level are not used to long sentences, length had to be kept to a minimum.

5. Order: To minimise any element of fatigue, the longer sentences were alternated with the shorter ones.

5. Sense: "In a reading technique, the sentences must be natural and clear."[24] Although the ideal is to make normal, natural sentences, they must also contain all the desired phonemes and repetitions of these in a minimum of space. Some concessions to meaning have been made on these grounds, particularly in sentence 15, where there were a number of items still to be included in the design, and all other possibilities seemed to have been exhausted.

6. Minimal pairs: Phonemes are established by determining minimal pairs, such as bout/bu, which are distinguished only by the sounds /u/ and /y/ - hence /u/ and /y/ are phonemes. The questions arises as to whether the sentences should be composed of such contrasts. Lado maintains that "minimal pairs are not necessary for production tests ordinarily", with a proviso that "when there is a choice between two equally satisfactory words and a minimal pair can be found for one of them, this word might be favoured".[25]

Since a major consideration of the sentences was that they should be natural and clear, unless a minimal pair was well suited to the context, special efforts were not made to include it.

The Sentences

The final version of the sentences is presented below, each sentence followed by a list of the items under study in it.

1. Père ne trouve pas son mouchoir vert.

/u/	trouve, mouchoir
/r/final	père, mouchoir, vert
t final	vert
ch	mouchoir

2. Préférez-vous le théâtre, la radio ou la télévision?

/r/, initial	radio
/e/	préférez, théâtre, télévision
/u/	vous, ou
th	théâtre
si	télévision
s, final	vous

3. Le bureau de Paris donne sur une rue.

/r/, intervocalic	bureau, Paris, sur une
/r/, initial	rue
/y/	bureau, sur, une, rue

/o/ bureau

/ɔ/ donne

s, final Paris

4. Prendre le thé à quatre heures, c'est autre chose.

/r/ post-consonantal prendre, quatre, autre

/o/ autre, chose

ch chose

qu quatre

h, initial heures

th thé

s, final heures

5. Deux? Non, j'en veux six mille.

/i/ six, mille

/ʒ/, initial j'en

eu, /ø/ deux, veux

x, final deux, veux, six

6. Je rentre prendre mon déjeuner à neuf heures.

/ɑ̃/ rentre, prendre

/r/,initial rentre

/ʒ/, initial and medial déjeuner, je

eu /œ/ déjeuner, neuf, heures

s, final heures

h, initial heures

7. On veut un bon feu en hiver

/õ/	on, bon
eu, /ø/	veut, feu
h	hiver

8. Comprends-tu toute la question, Jean? Tu comprends tout?

/y/	tu (2)
/u/	toute, tout
/õ/	comprends (2)
/ɑ̃/	comprends (2)
/ʒ/ initial	Jean
qu	question
ti	question
t final	tout,
s final	comprends

9. Attention, tu chanteras toute la chanson

/ɑ̃/	attention, chanteras, chanson
/õ/	attention, chanson
/y/	tu
/u/	toute
s final	chanteras
ti	attention
ch	chanteras, chanson

10. La montagne est difficile en été aussi

/i/	difficile, aussi
/e/	été
/o/	aussi
gn	montagne
t final	est

11. L'eau est bonne au fond

/o/	eau, au
/ɔ/	bonne
/oral vowel + nasal cons/ - bonne	
/õ/	fond
d final	fond
t final	est

12. A la campagne les gens travaillent à genoux au soleil

/o/	au
/ɔ/	soleil
/j/	travaillent
/ʒ/	gens, genoux
(g - spelling	" " ")
gn /ɲ/	campagne
s final	gens

13. Anne a dix ans depuis hier

/i/	dix, depuis
/oral vowel + nasal cons./ Anne (c.f. ans)	
/ɑ̃/	ans

h initial	hier
s, final	ans

14. On soigne la jeune fille, mais elle meurt

/j/	fille
/ʒ/	jeune
eu /œ/	jeune, meurt
gn /ɲ/	soigne
t final	meurt

15. Une partie de la queue regarde la porte

r, preconsonantal	partie, regarde, porte
r, initial	regarde
queue.	

The number of repetitions of phonemes follows, according to "error type" classification.

1. Phonemic

/u/	7
/y/	7
/$\tilde{\alpha}$/	8
/$\tilde{o}$/	8
/$\tilde{\alpha}$/:/$\tilde{o}$/	4 (in same words)
/u/:/y/	3
oral vowel:nasal vowel	2

2. Phonetic

/i/	8
/e/	8
/o/	7

/o/:/ɔ/	3	
R: final	3	
initial	4	
intervocalic	3	
post-consonantal	4	
pre-consonantal	3	

3. Distributional

/ʒ/ initial	6	
other	1	
/j/	3	(also spelling - l, ll)

4. Spelling Influenced

ch	4	t, s } ion	3
g	2	Final s	8
gn	3	t	5
eu (ø)	4	x	3
eu (œ)	5	d	1
qu	2	Initial h	4
th	2	queue	1

It will be noticed that some items occur more frequently than others - this is not necessarily an indication of their considered importance. In general it was tried to keep the frequencies about the same within each group. In the case of final s, and initial /ʒ/, the number reflects the fact that it occurred more frequently in words needed

for other phonemes under study.

/R/ was divided for study, because learning students tend to have a varying amount of difficulty in the pronunciation of /R/ according to its position in a word. They may be able to pronounce it in final or intervocalic position, but not when it occurs initially or post-consonantally. It was hoped that such a division would show any such tendencies at third form level.

"Queue" was included to see what distortions would be made to it, and whether any patterns or preference for one form emerged.

The sentences, in summary, were:

1. Père ne trouve pas son mouchoir vert.
2. Préférez-vous le théâtre, la radio ou la télévision?
3. Le bureau de Paris donne sur une rue.
4. Prendre le thé à quatre heures, c'est autre chose.
5. Deux? Non, j'en veux six mille.
6. Je rentre prendre mon déjeuner à neuf heures.
7. On veut un bon feu en hiver.
8. Comprends-tu toute la question, Jean? Tu comprends tout?
9. Attention, tu chanteras toute la chanson.
10. La montagne est difficile en été aussi.
11. L'eau est bonne au fond.
12. A la campagne les gens travaillent à genoux au soleil.

13. Anne a dix ans depuis hier.

14. On soigne la jeune fille, mais elle meurt.

15. Une partie de la queue regarde la porte.

CHAPTER IV

SECTION ONE: THE CONTROL OF EXTERNAL VARIABLES

Letters were sent to seven principals at the end of July, 1969, telling them of the proposed study and seeking permission to tape-record some of their pupils. All proved willing to cooperate. Heads of Department were then contacted, either in person or by letter, explaining the intended research in more detail and requesting the following information:

1. Date of end of year examinations for third formers. This would enable visits to be made shortly afterwards, and without inconveniencing schools.

2. The number of different third forms and teachers. This was to get an estimate of numbers.

3. The method of teaching.

4. If any IQ test had been conducted the previous year, the results of which I could have access to.

5. The approximate percentage of pupils with intermediate experience of French, to see if there would be a sufficient number.

Responses varied from enthusiastic offers of assistance to courteous cooperation. One school failed to reply. For various reasons (explained in confidential appendix) two schools were dropped from the original seven and replacements

found at short notice. All schools were visited at least once before recording took place. From the information given in replies, and from subsequent visits, most details could be arranged prior to the day of the test.

Sampling

Class lists were procured, and those fulfilling the prerequisites (not of foreign parentage, and either having had no French experience at intermediate, or French twice a week or more) were marked on them. Any pupils with an "IQ" less than 100, as measured by the entrance tests to their school, were excluded. Class divisions were eliminated, and lists compiled according to experience (or, in cases where both methods were in use, according to method and experience). Each person on the lists was assigned a number, and random number tables used to choose the sample.

Recording conditions

Nervousness and tension are often occasioned by placing a person in front of a microphone and requiring him to perform a task[1]. However, if the microphone is hidden, any tension arising from the fact of seeing it would be eliminated. For this reason, a hidden microphone was to be used.

Presence of experimenter

Tension may also be occasioned by the presence of strangers[2], so that it was thought best for the teachers to be left alone with their pupils.

Information for Pupils

To control the external situation, procedure for every pupil had to be as near as possible to the same. For this reason the information he had about his task, the instructions he was given and the way they were given, were all standardised, and presented on a cyclostyled sheet. The title "Information for Pupils" was chosen as this had less formal connotations than a word like "instructions", which might have suggested a test. This was not a test, at least in the third form sense of the word, and it was wished to convey this message to the pupils without actually stating it explicitly, which would only have served to introduce the idea. It was hoped that the tone of the passage and the choice of words would be able to achieve this end. Colloquial language was used, as it makes reading easier and faster, and is less formal, an aspect calculated to put the pupil more at ease.

The actual wording and format of the sheet follows this section.

To allay any fears that this might be a school test, a résumé of the object of the task was given. Random sampling was explained in terms of drawing names from a hat, as it was thought that random number tables, the method actually used, would be unheard of at this level. The actual 'instructions' were designed to emphasise the fact that the task was an easy one, and the outcome not particularly important. The aim of the sheet was to set the pupil at ease and minimise the amount of tension, in the hope that his pronunciation would be a normal one. Lado also brings up this point[3]:

> "A person's pronunciation varies in accuracy depending on the tension under which he speaks. The same student who has conquered a problem when reciting in class will make elementary mistakes in front of a strange audience or facing a microphone."

Lado suggests that all we can hope to do is devise a test which will be reasonably representative of language in use. We then test all the students under the same conditions, or nearly the same conditions as possible, and make judgements on the basis of the performance of each student on the test under these conditions. The use of standardised written instructions, designed to keep tension to a minimum and a situation as controlled as possible, with standardised verbal instructions from the teacher were an attempt to create informal yet identical conditions for each pupil.

INFORMATION FOR PUPILS

What's going on?

Firstly, this is nothing to do with your school - it's just part of a scheme dreamed up by someone at the University to help them with their own work. They reckon that things they can find out from Third Form French pupils would be a help to people later on in school, and at University.

Why me?

The reason that you were chosen from your class, and not your best friend, is that all the names of people taking French in the Third Form were sort of put into a hat, and yours happened to be one of the first to come out - so it doesn't matter if you're good or bad at French - it's just a matter of luck.

What do I have to do?

There's nothing hard to do. Your teacher is going to ask you a few questions - answer them if you can. If you don't understand it the first time, the question will be repeated.

After that, you will be handed a sheet with 15 easy sentences on it, which you will be asked to read out. It doesn't matter how long you take, just so long as you read them all.

Okay?

.....

Information for Teachers

As explained above, all aspects of the test had to be kept as near as possible to the same for every pupil. To control the exchange between teacher and pupil, and to make sure that all teachers knew what was expected of them, instructions to teachers were also standardised and presented on a cyclostyled sheet. This too was entitled "information" as the term "instructions" seemed rather like an order, an impression the researcher did not wish to convey. Formal English was used, seeing that the sheet was intended for teachers, who are accustomed to using this style and might be disconcerted to find colloquial English in written form when there was no need for it.

The content and format were as follows, on one sheet:

INFORMATION FOR TEACHERS

For this investigation I wish to hear the pupils' oral response to four questions, and their reading of 15 sentences. It is preferable to have the teachers asking these questions and giving instructions, since a stranger would a) tend to make the pupils more nervous and b) have an unfamiliar accent which would make comprehension of the questions more difficult, both of which factors could be detrimental to their performance. It is important to preserve as closely as possible the classroom atmosphere,

however, possible distractions make recording there undesirable, hence the teacher's role is vital in maintaining as much as possible a relaxed atmosphere.

1. Please give the sheet 'Information for Pupils' to the pupil, and read it with him - this ensures that he has read all of it, and is less likely to be uncertain what is required of him.
2. When the pupil is ready, say "Here are the questions", and ask him the following four questions:

   1) Comment vous appelez-vous?

   2) Quel âge avez-vous?

   3) EITHER A quelle école allez-vous?
      OR A quel lycée allez-vous?
      according to usual terminology - teacher's preference.

   4) Depuis combien de temps étudiez-vous le français?

   You may repeat each a second time if required, then go on to the next question.

3. After the questions have been answered, the teacher is requested to hand the sentence sheet to the pupil, with the words "Here are the sentences you are to read aloud." These are the only instructions. If pupils are in any doubt, these instructions may be repeated.

4. When the pupil has read the sentences aloud, he should be thanked and dismissed.

The results of this study will be made available to those interested some time next year.
Thank you very much for your co-operation.

Reasons for having the teacher conduct the interview and the importance of keeping the atmosphere relaxed were explained in the first paragraph.

Next came the actual order to be followed in the interview. It is standard methodology to have someone read the instructions with the subject, otherwise there is no guarantee that he has read it properly.

Words spoken are given in quotation marks to ensure that the instructions are in fact the same for everybody. An indirect command (Tell him that ...) can yield many different direct statements.

To guard against extra words being added, the proviso 'These are the only instructions' were inserted and elaborated upon.

It is courtesy to thank people for their co-operation, but this is not always remembered in circumstances where one's attention is elsewhere. For this reason item four and my own thanks were included.

SECTION TWO: THE TRIAL

The Trial

The 'test' was now ready to be tried on a sample of pupils, and one of the schools already approached was selected. The staff involved were told of the arrangement and briefed on their part. The room chosen for the administration of the task was a small one, but suited to concealing a microphone and tape recorder. The room was made ready, and when a teacher became available, his part was explained in detail, after which he was left in the room. Pupils were called individually, and sat opposite the teacher. After attempting to answer the questions asked them, and reading the sentences, they were dismissed. Recording of eighteen pupils, from five classes, and with four teachers took almost a whole day, including the time taken to set up the equipment and time spent waiting for teachers to become available.

Observations and Modifications

A number of difficulties were encountered, which led to a modification of some aspects of the design, and a questioning of others.

1. Individual variation of method

One of the first things to become apparent was that the practice of 'Audio-Lingual' French varies from teacher

to teacher. The same books were used, but with a different emphasis. One teacher said that this was the first reading aloud that the class had done, another said that they read aloud sections from each unit. However, since the study is concerned with methods as practised, such differences are not important.

2. Sound Reproduction

a) Hidden Microphone: The hidden microphone was found to be not a good idea, at least in this case. A lot of preparation time is needed in order to conceal the equipment - the microphone must be reasonably close to the pupil, and if directional, pointed towards him, yet firmly fixed and out of sight. A tape recorder is a large object to conceal in a bare room or classroom, and its wires must also not be seen. If all the equipment has to be shifted and set up again, as happened in the pre-test, it may not be possible to create the same conditions again. A further reason against a hidden microphone is that it makes sacrifices to reproduction which cannot be afforded in a study of this nature. As for minimising tension, which was the aim of having it hidden, a number of pupils actually seemed to expect to be taped, and did not appear nervous about the idea. A voice on one tape may be heard uttering loudly "Is this on tape? Where's the tape?"

Disadvantages of a hidden microphone seemed to be definite - clear reproduction is essential, and the use of a hidden microphone did not always accomplish this. Advantages seemed doubtful, and the idea was dropped for subsequent recordings.

b) Extraneous noises: These were another influence on reproduction - wind whistling outside the window, close to the microphone, clatter in a neighbouring room. Where possible in the future, rooms would be chosen in a locality where such interference would not take place.

3. Words and sentences

a) The fourth question "depuis combien de temps étudiez-vous le français?" was unfamiliar to many. However, as this was irrelevant to the actual task required of them, it was retained in the design.

b) Various words in the sentences were new to the pupils, and thus were more difficult to pronounce. Sometimes they were identified with a word already encountered, e.g., soleil became soulier. This is much as expected - one cannot hope to predict which words will be known to all third-formers, beyond a few grammatical items, and all sentences were left unchanged.

c) The constant mispronunciation of the 'c' in 'difficile' as /k/, (as in English), led to its inclusion in the section "spelling-influenced errors".

4. Teachers

a) Individual differences: This appeared to be an important variable, and one which could not be controlled beyond a certain measure without re-designing the study, which it was not wished to do. The teachers' attitude towards the task varied. A teacher who appeared to be rather unhappy about the test thought that his class was tensed up and seemed to regard it as a test, although those of the pupils who were questioned denied this. The pupils of another teacher, who almost made a game of it, thought it was "quite fun", and did not feel it was a test. One of the reasons for including teachers was to minimise tension and maintain a relaxed atmosphere, and it seemed that in some cases this had happened. It was less evident that tension had been created and while realising that the teacher is a relatively uncontrolled variable, the researcher decided to leave the design as it was in this respect.

b) Following Instructions: Although individual differences were evident, a general trait also appeared - this was an apparent inability to follow instructions. Teachers were inclined to add a pre-amble, a lengthy explanation somewhere, or words of encouragement. It is necessary that this sort of thing does not occur, so that the situation is 'controlled' and the same (as much as possible) for all subjects. To try to prevent further such occurrences, the

"information for teachers" was altered in tone and retitled "Directions for teachers" ('Directions' still seeming more polite than 'Instructions'). The words "PROCEDURE: IT IS IMPORTANT TO FOLLOW THESE DIRECTIONS CAREFULLY" were added before the numbered sequence of directions began.

The word 'next' was substituted for 'when the pupils are ready', which had occasioned some extra exchanges of conversation.

The words "<u>These are the only instructions</u>" were added after the words, "Here are the questions".

The format of the 3rd question, which requires a choice to be made, was altered, as some teachers had asked both alternatives, even when an answer had been given for the first one.

In the third 'direction', the words 'The teacher is requested' were deleted and the sentence 'These are the only instructions' was expanded to '<u>Remember, these are the only instructions</u>'. To the end of the sentence, an extra clause was appended - "but nothing may be added".

These were considerable and severe alterations, but nevertheless highly necessary. The revised 'Directions' follow.

DIRECTIONS FOR TEACHERS

For this investigation I wish to hear the pupils' oral response to four questions, and their reading of 15 sentences. It is preferable to have the teachers asking these questions and giving instructions, since a stranger would a) tend to make the pupils more nervous and b) have an unfamiliar accent which would make comprehension of the questions more difficult, both of which factors could be detrimental to their performance. It is important to preserve as closely as possible the classroom atmosphere, however, possible distractions make recording there undesirable, hence the teacher's role is vital in maintaining as much as possible a relaxed atmosphere.

PROCEDURE: IT IS IMPORTANT TO FOLLOW THESE DIRECTIONS CAREFULLY

1. Please give the sheet 'Information for Pupils' to the pupil, and read it with him - this ensures that he has read all of it, and is less likely to be uncertain what is required of him.
2. Next, say, "Here are the questions". These are the only instructions. Now ask him the following four questions:
   1) Comment vous appelez-vous?
   2) Quel âge avez-vous?
   3) Either A quelle école allez-vous?
      or A quel lycée allez-vous?

      } teacher's preference

4) Depuis combien de temps étudiez-vous le français?

You may repeat each a second time if required, then go on to the next question.

3. After the questions have been answered, hand the sentence sheet to the pupil, with the words "Here are the sentences you are to read aloud". Remember, these are the only instructions. If pupils are in any doubt, these instructions may be repeated, but nothing may be added.
4. When the pupil has read the sentences aloud, he may be thanked and dismissed.

The results of this study will be made available to those interested some time next year.

Thank you very much for your co-operation.

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5. 'Information for Pupils'

One small alteration was made to this sheet. Part of the second sentence was changed from "Your teacher is going to ask you" to "you will be asked", as the teacher reads the sheet through with the pupils, and the original version does not sound natural.

6. Presence of experimenter

During the pretest, the experimenter was not always able to listen to the interviews, either because there was

no place to do this from, or because she was otherwise occupied, e.g. supervising the rest of the class whose teacher and a number of pupils were involved in the study.

An unfortunate mishap which occurred when a teacher decided to switch the microphone off after each interview and on before the next one began, indicated that it would be advisable to have the experimenter present at the interview. Apart from defeating the purpose of a hidden microphone, the above occurrence also resulted in the loss of three recordings, due to faulty manipulation of equipment. Even if the experimenter's presence were to add tension, it would be a constant condition, and the prevention of any such incidents in the rest of the tests was imperative.

The trial resulted in considerable alterations in both recording conditions and in instructions to teachers. The value of these alterations remained to be seen.

CHAPTER FIVE

THE DATA

PART ONE: THE TEST

This process was greatly facilitated by the help of a University Technician who accompanied the researcher to all schools after the trial. This meant that the technical aspect was completely taken care of , leaving the researcher free to attend to other details concerning the arrangements for staff and pupils. The advantages of having an experienced person in charge of recording is obvious, and borne witness to by the quality of the recordings. In addition, the presence of an older man, of tact and dignity and with a fluent command of French was an equally valuable asset.

Sampling

Sampling was carried out as for the preliminary test, using a random number table, and was done at least one day prior to the day of recording, for convenience, as gathering lists, modifying them and sampling is a time-consuming process.

Recording

All recordings, in six schools, took place near the end of the third term, as planned. With one exception, the

equipment was set up in a classroom with little extraneous noise, except the unpreventable, for example a plane flying overhead. On the other occasion, a small room in the administration block was used, and people could be heard walking about outside. The pupil and teacher sat opposite each other, with the microphone facing the pupil 12-18 inches from him, on the desk. The tape recorder and operator were about six feet away, either to right or left and the researcher in general sat discreetly some distance behind the pupil, in a position where she could not be seen by him during recording. Partly to emphasise the informality of the situation and partly to occupy the only person in the room who was not doing anything important, the researcher, somewhat reminiscent of Madame Defarge, knitted for the duration of the tests.

Pupils were called in individually, and sat at a desk with the 'Information Sheet' on it. The teacher read this through to the pupil, who followed on his own copy. The teacher then asked the pupils the four questions stated earlier (p.68). If no reply had been given after the repetition of a question, the next one was asked. When all questions had been asked, the teacher handed the pupil the sentence sheet (p.84) with the words "Here are the sentences to read aloud". After sentence 15 had been completed, the pupil was thanked and dismissed.

After the first school, recording began with a statement of the pupil's name, usually by the teacher, whilst the pupil was being called. The alternatives "Comment t'appelles-tu?" and "Quel âge as-tu?" were also added to questions 1 and 2 after the first teacher had used these forms.

Recordings were all made with the same recorder, at a speed of $7\frac{1}{2}$ i.p.s., but this was subsequently edited and to economise on tape, re-recorded at $3\frac{3}{4}$ i.p.s.

The recording procedure outlined above applies to all schools. However, particular observations and variations are now noted.

Following Instructions

In general teachers followed instructions far better than previously, only a few teachers making additions, which were of a slight nature. Some found difficulty in articulating common colloquial expressions, and either left them out, or changed them to fit their own idiolect. This applied to the words "sort of", which were omitted by two teachers, and "okay" which on three occasions became "all right", or "is that all right". Such alterations and additions as were made were not considered to change the test situation, and in fact probably sounded more natural from the people concerned. The one teacher who made many

alterations, additions and interjections, and was considered to have altered the situation, was eliminated from the sample.

Audio-Lingual

One of the first things that became apparent, as in the trial, were differences in the audio-lingual method as practised by individual teachers. In the operational definition of Audio-Lingual, it was stated that "if a school considered it taught the Audio-Lingual method, then it was considered as such". However, individual differences are now made known for the reader's interest. One teacher followed the Audio-Lingual book, but had no records or tapes, that is, the teacher did the reading; another used records very rarely, perhaps once every two or three weeks and otherwise did the reading himself. Of those who used tapes more frequently, one teacher estimated that his class had approximately two whole periods of tape a week, one had tapes nearly every day, one used tapes for no more than one third of the lesson, another reported that "a number" of his lessons were with tapes, and the other estimated that in four-fifths of his lessons the tape was used for ten minutes.

In comparison, most teachers of the traditional method had used no tapes or records at all, although one had "occasionally".

Sound reproduction

Reproduction was a great improvement on that obtained in the trial, and only one subject was eliminated because of poor reproduction. Extraneous noises were still recorded, but were mostly unavoidable - bells, change of class noise, an aeroplane, etc.

Tension

As 'nervousness' is an extremely hard emotion to detect, because of its many manifestations, it is impossible to tell whether or not it had any effects on the data. However, it is also extremely likely that this variable was distributed equally throughout the sample, and was not exercising a constant bias; thus it may be neglected.

Numbers

The number of recordings taken was 87, but the elimination of five of these, one because of poor reproduction, and four because the teacher completely altered the test situation, left the total number in the sample at 82. Those taught by the Audio-Lingual method number 35, by traditional methods, 47. Those with experience were equal in number to those without - 41. Group 1, Audio-Lingual, with experience (A.E.) comprised 18 pupils, Group 2, Audio-Lingual, no

experience (A.N.), 17. Group 3, not audio-lingual, but with experience (N.E.) were 23, and Group 4, not audio-lingual, with no experience (N.N.) 24.

PART TWO: SCORING

Scherer and Wertheimer speak of "the long ordeal of scoring"[1], where they had teams of three judges, and a monitor and moderator who kept the tapes running, gathered up scoring sheets and "even made and served coffee". In their experiment, three scoring sessions were run a day, morning, afternoon and evening , but to prevent intervening variables, judges were changed at each session. "The same panel rarely served during two consecutive sessions, to try to combat boredom and fatigue'. The present writer, who was her own alternating panel, tape-changer, score-sheet filer, and coffee-maker, has somewhat similar feelings about the process - an 'ordeal'.

During this study, the tape of each school was played on one machine, and each sentence of each pupil was transferred to a loop tape, which allowed it to be repeated without rewinding of the tape. The use of the pause switch on the machine with the loop tape was found most satisfactory, as this enabled the sentence to be stopped for long enough for the score to be written down before the next sound was heard. Continuous mechanical repetition of

sentences (as happens on a loop tape) was found to be extremely exasperating. The researcher listened with earphones either on or a slight distance away from the ears - this latter practice was found more satisfactory than the former, as the sound was still close and clear, without the discomfort of heavy and hot earphones.

As regards fatigue, the present researcher found that an early morning session, lasting about one to two hours was the maximum that could be endured. A break of several hours was necessary before attempting to do any more listening, and later in the day 'endurance time' was often even more reduced. Two or three sessions a day of about one and a half hours duration were the general pattern.

The researcher was also monitoring in the language laboratory for an average of about an hour a day, which meant that constant contact was being kept with spoken French, an advantage when comparisons have constantly to be made.

At first each subject took up to an hour to score, but with practice this was reduced by half, and sometimes less. To facilitate scoring, a cyclostyled sheet was completed for each subject, showing name, school, where he could be found on the tape if necessary (sentence location), the date of listening, and his realisations of the critical phonemes. A specimen sheet with one line filled in appears

as an appendix. To check that the correct number of scores had been made, two cardboard cutouts were made to fit the scoring sheet, one of which exposed any extra scores that had been noted, the other of which exposed any gaps that should have been filled in. Any corrections were then made immediately. This method was very successful, but a simpler way would have been to have the scoring sheet designed to cater for the exact number of responses to be scored, which would eliminate this step altogether.

The whole sample was scored once, then grouped according to the order of listening, which yielded three groups. a random sample from each of these groups comprising fourteen subjects in all, 16% of the sample, was made by the Technician, who also recorded them in a scrambled order, and gave each a code number, so that there was no possible way for the researcher to know which subjects had been chosen. These were again scored, and the scores subsequently compared to get an indication of the consistency of scoring.

Consistency was very high for the 'spelling-influenced' and 'distribution' type errors with the exception of -ion, gn, /j/ and queue, where an average of four of the fourteen rescored showed some discrepancy. These items were rescored for the whole sample, in two sessions with a few additional half-hour breaks, and the second scoring

considered the more reliable. After rescoring the range of consistency was between 0 and 6 discrepancies with an average of 2, out of 58 items, which makes the average consistency for these items over 96%.

For the other items the range was wide, varying from 1 to 20 and 25 (the two highest) with a mean of just less than 12 discrepancies over the 69 items. This puts the average consistency at 82%. However, no provision was made for items which could have been termed 'extremely similar', anything which was not identical being counted as 'different', which accounts in part for this figure. Over the whole range of items studied the average consistency was about 89%.

From the individual scoring sheet, realisations of critical phonemes were transferred to a book, where they were set out in the four previously defined groups, and divisions between schools and teachers were also marked, for use when interpreting the data. From this book, totals for each realisation of a phoneme were calculated, and put into table form. These tables appear with the results.

In addition to the critical phonemes, deviant renderings of all words were also transcribed, in case common tendencies could be found. For example, in the word mouchoir, a person may have scored /u/ for the first phoneme

and /ʃ/ for the 'ch', but may have used /ei/ in the last syllable, instead of /wə/. The study of critical phonemes is at a decidedly restricted level; the noting of deviant observations is at the word level, and it is possible that common deviant forms may be used. These were set out according to groups, but teacher and school divisions were dispensed with. The words were considered sentence by sentence, and some general and specific observations appear in the results.

CHAPTER SIX

RESULTS

Introduction

Results are presented in order of the probable error source outlined earlier - phonemic, phonetic, distributional and spelling-influenced, the latter being in alphabetical order. Each item analysed is discussed, first as realised by the whole sample, and secondly as realised by the sub-groups. Following convention, in general, French phonemes are enclosed in oblique strokes, English phones or phonemes in square brackets, unless English phonemic comparisons are being made. Frequency tables are also presented after each discussion. It must be realised by the reader that only where there is a large difference in numbers, can this be considered a real one, as many differences could be due solely to chance. Thus, in the interpretation of tables, a series of figures for variants, such as 83, 96, 106, 115, taken over 5 words, could all be considered as of approximately the same frequency. The use of statistical method as an aid to the interpretation of the main totals would have served little purpose other than to confirm that the large differences are very probably not due to chance, and that the small differences probably are - an

assumption upon which interpretation has been based. As long as this fact is realised by the reader, the absence of statistics should have no harmful effects.

In the Intergroup comparisons, the Chi-square test of significance has been applied where it was thought a real difference might exist. This test enables us to compare the proportion of cases from one group, in a category, with the proportion of cases from another group. Values calculated allow us to estimate the probability that the differences observed are real, and not merely due to chance. Various levels of 'confidence', or 'significance' may be determined, i.e., the researcher may choose how many times in a hundred he is prepared to be wrong if he decides that differences are not due to chance. He may decide that the chance of being wrong 25 times in a hundred is sufficiently 'certain' for his purpose. On the other hand, the chance of being wrong even five times in a hundred may be too high a risk to take, and he must be confident of his statement being true 99% of the time, or being false only 1% of the time. This is a 99% confidence level, or, rephrasing it, a .01 level of significance.

For this study, .05 was chosen as the level of significance, this being a customary value for such tests[1]. This means that if it is stated that an observed difference is 'significant' and therefore not due only to chance, such a

statement is likely to be wrong 5% of the time. If the likelihood of being wrong was greater than this (considered too high for this study), the comparison is 'insignificant'. If a higher level of significance was calculated, (.01, .001), this has been noted; .01 and .001 levels of significance mean that the likelihoods of being wrong are respectively once in a hundred and once in a thousand.

However, owing to the large spread of variants, numbers are often too small for any reliable interpretation of the figures, in spite of tests of significance. Even where occurrences involve larger numbers, a difference has usually to be considerable before it is statistically significant. The reader is warned of the danger of his being in error if he chooses to make absolute differences out of variations that could well be due to chance.

Sometimes a mistake may be made by only one group, and by large numbers of that group. This will be pointed out in the group comparison. Sometimes a variant may occur for a very individual reason - the pupils of one teacher, or even one or two people, making the same error consistently. Where this has been possible to trace, it has been noted as such. If variants are not restricted to one group, or to an individual cause, it may be assumed that they are distributed fairly evenly among pupils of all teachers.

The writer has tried to give reasons for the occurrence of all recurring variants. Where there seems to be no apparent reason, this has also been noted, and it is suggested that they result from a mistaken conception of what is required. Kenneth Brown quotes P. Schlacter on a similar type of error observed in English learners:

> "(There are) ... mispronunciations that result not from a student's inability to produce the sounds of a given English word correctly, but, rather, from a misconception about what sounds actually do occur in the word. Thus a student may be able to pronounce the words full and fool perfectly, but may be misled ... into pronouncing wool to rhyme with fool rather than with full."[2]

Sometimes a pupil "creates" his own form. If a form appears only once, or is used by only one person, it has been labelled an "individual creation", which cannot be used to generalise to the whole population. These individual forms are shown on the tables, but are not considered when explaining reasons, or when giving numbers of variants in the table of totals. The total number of individual creations is also shown.

Format of the Table

The table is divided into the four groups of analysis previously explained (AE, AN, NE, NN), and frequencies of variants are given for each word. The total frequency of variants for each word is also shown, and a grand total

for each variant has been calculated. Variants that do not occur in all four groups are set slightly apart from the others. Also tabled, from left to right, are

a) the most common variant for each word (the mode, labelled M)

b) the "individual creations" (IC),

c) the number of variants for each word, including individual occurrences.

In the table of totals, it is the actual numbers of "creations" which are shown, and the number of recurring variants only. The total number of variants may be easily computed by adding these two figures.

SECTION ONE: PHONEMIC ERRORS

THE PHONEME /y/

By far the most frequent realisation of this phoneme was the centralised monophthong [ʉ] or a slight glide from centre to this position, (symbolised also by [ʉ]), which accounted for over half the total number of realisations. [y] had the next highest frequency of occurrence, but was less than one quarter times as frequent. The [ʉ] phone, preceded by a yod, [jʉ], as occurs in the English word 'tune' was of a similar frequency, probably influenced by the spelling, particularly in the word bureau. This yod also preceded the phone [y]. The phoneme /u/ and a diphthong with central starting point and the /u/ termination were also of a similarly high frequency, indicating a confusion of the two phonemes /u/ and /y/.

Other variants were limited to certain words. All occurrences but three of /ə:/ were in the word sur, for which it was the most popular variant, probably influenced by the spelling 'ur' as in fur, or surf. This spelling would not be as influential in the word bureau, which exists in New Zealand English with the yod preceding [ʉ]. The most popular variant for bureau was this form - [jʉ], and the second most popular the form [jy]. The habit of

pronouncing a yod before the vowel, acquired in the native language, appears hard to cast aside. This yod is also used in combination with the French vowel /u/, mostly in the word sur, indicating an additional confusion of phonemes.

A schwa form /ə/, mostly in bureau, also occurred on occasions, when the first syllable was treated as if in English, and given no stress, leading to a reduction of the vowel sound. The use of [ʌ] for une is probably due to the spelling, although [ʌn] may be a confusion with un, pronounced as the 'un' of English uncle by misguided pupils. [ʋ] is the 'u' of put and full, and its use is probably spelling-influenced.

A variant of /t/ also affects the pronunciation of tu, the sequence becoming [tʃü], (English chew). The substitution of /tʃ/ for /t/ + /j/ in English is acknowledged by Gimson[3] to take place when /t/ is followed by the spelling 'u'.

Most words have a large number of variants (especially including individual occurrences), except the word rue, which has only 5, as opposed to 7, 8 and 9. However, the errors made are those which show confusion with the word roue, and if this is a probable general pattern for such words, it is important to realise this fact.

The other important fact to note is that the most popular phoneme substitution for both /u/ and /y/, used for over half the realisations of /y/ and over 60% of the realisations of /u/, is the central monophthong [ʉ], with or without yod, which means that there is, for the majority of pupils, no effective contrast between the two phonemes. Added to the other confusions noted (the use of /y/ for /u/, [əu], /u/, /jʉ/ for /y/) there appears to be little clarity among pupils as to the distinctive nature of these two phonemes in the French language. (see infra, u:y)

Intergroup comparison

The pattern is similar for all groups, with only one significant difference being found. Group 3 used the variant [jʉ] for the word tu significantly fewer times than the other groups at the .01 level. Groups 1 and 2 seemed to use the variant [tʃʉ] more than the other groups, but this was mostly an individual phenomenon, two people in groups 1 and 2 using it three times. Group four seemed to have fewer occurrences of /y/, but this was found to be insignificant.

The use of /u/ was to a certain extent individual, being used five times, four times and three times by three individuals, and twice by three people. However, a number of people used it only once, and one person used it in the

word tu twice, the other occurrence being realised /y/.

The use of [əu] in group one is largely confined to two people, but this is not the case in groups two, three and four, where occurrences are spread throughout the sample.

The use of /ju/ for bureau and sur is confined to the pupils of one teacher, with one exception. The differences in the numbers of "creations" between groups 1 and 3 and groups 2 and 4 are greater than would be expected by chance at the .05 level, so that it would seem as if experience may be an influencing factor in this particular case. Group 1 also has more variants for the word tu than the other groups, but the number of recurring variants is approximately the same, so that the tendencies seem the same for all groups.

In general it appears as if the overall pattern described for the whole sample is applicable to all groups.

VARIANTS OF /y/

GP 1 AE	✓	ʉ	jʉ	ə:	jy	əu	u	ə	tʃjʉ	ju	ʋ - ʌ	M	IC	Number of Variants
bureau		4	10		1	1	2					jʉ		5
sur	1	1	3	10	1			1				ə:	ɒ	7
une	2	12				2					1	ʉ	œ̃	5
rue	3	13				2						ʉ		3
tu	2	7	4			2			1			ʉ	əy, jə:	7
tu	3	4	4		1	2	1	1	1			ʉ/jʉ	i	9
tu	3	7	2		1	2			2	1		ʉ		7
GP 2 AN														
bureau	1	2	8		4		1	1				jʉ		6
sur	3		1	10	1		1	1				ə:		6
une	2	10				2	1			1		ʉ	ɔ̃	6
rue	3	11				2	1					ʉ		4
tu	1	10	3		1	1			1			ʉ		6
tu	4	7	2		1	2			1			ʉ		6
tu	3	9	2			1			2			ʉ		5

	✓	ü	jü	ə:	jy	əu	u	ə	tʃjü	ju	ʋ	-	ʌ	M	IC	Number of Variants
GP 3 NE																
bureau	3	1	8		7		1	2						jü	je	7
sur	4	2	1	7	6	1				1				ə:	uə	8
une	5	11		1			2				2	1	1	ü		7
rue	4	16					3							ü		3
tu	4	13			2	1	3							ü		5
tu	7	12			1	1	2							ü		5
tu	3	13				3	2					1		ü	ʃy	6
GP 4 NN																
bureau	4	4	7	1	2	1	2	2		1				jü		9
sur	2		4	12	1					4				ə:	əʋ	6
une	3	15		2			1				1		2	ü		6
rue	3	18				1	1				1			ü		5
tu	1	10	3		1	7	2							ü		6
tu	3	13	3		1	3	1							ü		6
tu	3	11	1			5	2		2					ü		6

	✓	ʉ	jʉ	ə:	jy	əu	u	ə	tʃjʉ	ju	ɤ	-	ʌ	M	IC	Number of Variants
TOTAL																
bureau	8	11	33	1	14	2	6	5		1				jʉ	1	9
sur	10	3	9	39	9	1	1	2		5				ə:	3	9
une	12	48		3		4	4				4	1	4	ʉ	2	8
rue	13	58				5	5				1			ʉ		5
tu	8	40	10		4	11	5		2					ʉ	2	7
tu	17	36	9		4	8	4	1	2					ʉ	1	8
tu	12	40	5		1	11	4		6		2			ʉ	1	8
TOTAL:	80	236	66	43	32	42	29	8	10	6	5	3	4		10	

THE PHONEME /u/

The most usual variant for this phoneme was the centralised monophthong [ü], or a diphthongal glide from centre with this element prominent, which was also symbolised the same. [ü] occurred almost three times as often as /u/, which was the next most frequent realisation. This is the nearest New Zealand phone to /u/, and it is logical that it could have been identified with the French phoneme. Another commonly recurring substitution was a diphthong from a central position to the [u] position, a form that could perhaps be expected in New Zealand, with the tendency to diphthongise.

The variant /jü/ also occurs instead of /ü/ in some English words (with N.Z. pronunciation) or as an alternative (e.g. suit), and it may be association with a word like tutor which led to its use in the words tout and toute. It could, on the other hand, arise from a confusion with both the word tu and the sound required for it. The use of /y/ shows confusion between these two phonemes.

Most of the other variants seem to have a possibility of being spelling-influenced. /ɤ/ may have been an attempt at /u/, or may be associated with the spelling 'ou' as in English could; [o:] may have been a reading error, associated with the English word or, or may have been

associated with the spelling as in English court; [ɒ] is represented by the spelling 'ou' in English cough, but one of the subjects here read the 'u' as 'n', and gave the English sequence [mɒn]; /o/ is spelt 'ou' in some English words like though, dough, or the word ou may have been confused with the word au; [ʌ] is also spelt 'ou' in country, enough. /ə/ appears to be an individual observation, the word mouchoir becoming /məʃü/. The use of /ɑ/ seems to have no logical origin.

[ü] was the most popular variant for all words individually, except ou, which had more people choosing the correct version, although less than half the sample did so. For most other words, /u/ was the next most popular, but the word tout, possibly because it was the last word of the sentence, had more people giving a drawled [əu] pronunciation.

Apart from in the word ou, the number of realisations of the correct phoneme were few, mouchoir being the only other word where this realisation was used by more than a quarter of the sample. Even the inclusion of the diphthong [əu] as an allophone of the phoneme /u/ hardly brings the percentage of the sample producing /u/ to above 25%. This means that the greater part of the sample produced either a phone not very much resembling that required in the French word, or a sound that is likely to be confused with the phoneme /y/.

Intergroup differences

There were some intergroup differences for this phoneme that were of significance.

Groups 1 and 3 (those with experience) had a higher proportion of correct responses for the word trouve, compared with Groups 2 and 4. Vous was rendered correctly more times by Group 3 than by the other three groups, at the .02 level of significance, and this was spread over six teachers. Although it appears as if Group 3 also rendered toute and tout correctly more often, the difference between totals for both occurrences of toute was not significant, and the expected frequency for values of tout were too low for the chi-square test to be applied.

In Group 1, few people used the variant [ü] for the word ou, compared with other groups, but this was compensated by a comparatively high use of the variant [ɔ:]. In the same group, fewer people chose the variant [ü] for toute, but more variants occurred. The variant [jü] was more prevalent in Group 1 than anywhere, eight out of a total of 12 occurrences being in this group, one person using the variant three times, one twice and three once. Yet despite these differences, [ü] is still in general the most common variant for group 1, as for other groups.

Over all, those differences which were significant do not reveal any consistent influence upon the patterns for each group, which by and large are very similar for all groups. One would thus expect pupils of all groups to make the same mistakes, namely those predicted for the whole sample.

VARIANTS OF /u/

GP 1 AE	✓	ʉ	əu	ɤ	ɔ:	ɒ	jʉ	y	ɑ	o	ʌ	ə	–	o^{u}	M	IC	Number of Variants
trouve	6	12													ʉ		2
mouchoir	5	10				2		1							ʉ		4
vous	1	13	3												ʉ	əy:	4
ou	7	2			6				2	1					✓		5
toute	5	6	2				3	1				1			ʉ		6
tout		11	2				4					1			ʉ		4
toute	3	10	1				1	1				1			ʉ	growl (sic)	6

GP 2 AN

trouve	1	16													ʉ		2
mouchoir	5	8		1		1					1				ʉ	$\tilde{\alpha}$	6
vous	2	13	1												ʉ	jy	4
ou	8	5			3										✓	ei	4
toute	2	11	2									1			ʉ	wi	5
tout		10	4				1	2							ʉ		4
toute	1	12	2					2							ʉ		4

	✓	ʉ	əu	ɤ	ɔ:	ɒ	jʉ	y	ɑ	o	ʌ	ə	–	o^u	M	IC	Number of Variants
GP 3 NE																	
trouve	6	14	1	1					1						ʉ		5
mouchoir	8	11		2							1	1			ʉ		5
vous	8	13	2												ʉ		3
ou	11	7			2	1				1					✓	oɤ	6
toute	3	17	2						1						ʉ		4
tout	6	15	2												ʉ		3
toute	6	14	3												ʉ		3
GP 4 NN																	
trouve	2	21		1											ʉ		3
mouchoir	5	13		5										1	ʉ		4
vous	2	17	5												ʉ		3
ou	9	9				1			1	1			1	2	✓/ʉ		7
toute	2	18	3		1										ʉ		4
tout		16	7				1								ʉ		3
toute	1	17	3				2					1			ʉ		5

	✓	ü	əu	ʌ	ɔ:	ɒ	jü	y	ɑ	o	ʌ	ə	-	o^u	M	IC	Number of Variants
TOTAL																	
trouve	15	63	1	2					1						ü		5
mouchoir	23	42		8		3		1			2	1		1	ü	1	8
vous	13	56	11												ü	2	3
ou	35	23			11	2			3	3			1	2	✓	2	8
toute	12	52	9		1		3	2					2		ü	1	7
tout	6	52	15				6	2					1		ü		6
toute	11	53	9				3	3			1	1			ü	1	7
TOTAL:	115	341	45	10	12	5	12	8	4	3	2	2	5	3		7	

CONTRAST /y/:/u/

A study of the contrast /y/:/u/ (for tu:tout or toute) shows that, as suggested above, few pupils are aware of the distinctive nature of these two phonemes in French. From the whole sample, only one person consistently made an /y/:/u/ contrast. One person made the contrast twice, and two people once, but the same people made no distinction, or the wrong distinction, on the other occurrences. 63 out of the 82 people in the sample made no distinction at least once, and 25 consistently made no distinction. Of the distinctions that were made, a number of these could not be considered valid, as they were either reversed (tu:tout = /tu/:/ty/), had one element wrong, for example /u/ for /y/, in contrast to [ʉ] for /u/, or had one very deviant element (e.g. /i/:[jʉ]).

Typical contrasts were [jʉ]:[ʉ], /y/:[ʉ], [ʉ]: [əu], and the validity of these may be questioned. However, they <u>are</u> distinctions. Yet only nine people made these types of distinctions consistently, and another 27 made one or two, out of the three.

There were few intergroup differences, except that all those who made any number of /y/:/u/ contrasts were in Group 3. However, with only four people involved, and only one consistent contrast, nothing can be inferred from this.

Evidently there is a great deal of confusion as to the quality of both /y/ and /u/, and little awareness of their distinctive (i.e. phonemic) nature in French.

THE PHONEME /$\tilde{\alpha}$/

The most common overall variant for /$\tilde{\alpha}$/ was an oral vowel + nasal consonant [ɒn], which seems to be the nearest English phone sequence to this phoneme, at least in New Zealand English. This occurred twice as often as the correct version, which was the next most common realisation. Thus the most common error here is of phonemic origin, brought about by the non-existence of nasal vowels in English. The learner substitutes the nearest familiar phoneme or combination of phonemes, in this case the oral vowel /ɒ/ and the nasal consonant /n/.

Spelling also appears to have been a large influence here, [en] accounting for the majority of variants of /$\tilde{\alpha}$/ in attention and for the third most popular variant of all other words containing 'en' in their spelling. Words spelt with 'an' were also subject to influence, the variants [α:n] and [æn] (as in the English words chant and channel respectively) being frequently substituted for /$\tilde{\alpha}$/ in chanteras and chanson. Another common variant was the nasal vowel /$\tilde{\alpha}$/ plus the nasal consonant - /$\tilde{\alpha}$n/, probably influenced by the spelling.

Other variants occurring, in order of frequency, were:

/e/ In comprends and chanson. The writer can think of no reason for this variant, whose occurrence is spread throughout the sample, particularly in the word chanson.

[ɒŋ] This occurred only where /ɑ̃/ is in final position comprends and ans. The use of this variant is predictable - /ɒ/ being an oral vowel in the region of /ɑ̃/, and /ŋ/ being a nasal consonant (velar). Gimson in fact mentions /ɒŋ/ as being a realisation of French /ɑ̃/ in words now in the English language, such as restaurant[4]. In view of these factors it is more surprising to note the scarcity of its occurrence than its use as a variant.

[ɒ̃n] For this variant, the New Zealand open o /ɒ/ has been nasalised, and the consonant added. Since the region of articulation is similar to that for /ɑ̃/, without the addition of the nasal consonant this form may well be acceptable to French speakers as a variant of /ɑ̃/.

/õ/, /ɛ̃/. These both occurred in the words comprends, attention, chanson and ans and are examples of a failure to distinguish between the nasal phonemes.

[æ] occurred as a variant in chanson and chanteras, in part influenced by the spelling, perhaps, yet there was no attempt to add a nasal consonant, so that it seems as if

the pupils were trying to give a French rendering.

[ɔ:n], [ə:n]. These were of very limited occurrence. The first seems to be an attempt at /õ/, the second perhaps at /œ̃/, which would mean that there has been a failure to distinguish the nasal phonemes.

Some individual words seem to merit special mention:

attention: The existence of this word in English appears to exercise a negative effect on the likelihood of its being pronounced correctly in French, as is evidenced by the large number of [en] substitutions, this being the sequence found in the English word.

chanteras and chanson: One might have expected the /ɑ̃/ phoneme of these two words to have been realised in approximately the same manner as each other, but for the first, the occurrence of /ɒn/ was nine times greater than for /ɑ̃/, (45:5), whereas for chanson the numbers were the same, (18:18). This may perhaps be attributed to familiarity with the noun and not the verb.

ans: This word had a larger number of correct renderings than of any alternative. It is the only occurrence of /ɑ̃/ in a monosyllable, and is also probably very familiar to most learners, which may perhaps account for this.

Intergroup Comparison

The pattern for /$\tilde{\alpha}$/ is largely similar for all groups, but some significant differences were found for certain words.

In the word chanson, group 4 had fewer occurrences of /$\tilde{\alpha}$/ than the other groups, but this was found to be not a real difference. Groups 1 and 2, the Audio-Lingual groups, seemed to have a higher frequency for /$\tilde{\alpha}$/ than Groups 3 and 4, in the word ans, but this too was insignificant. However, for the word attention, group 3 had significantly fewer occurrences of /$\tilde{\alpha}$/ than the other groups.

No significant difference was found to exist for the frequency of the variant [ɒn] in the word rentre, where it seemed as if Group 2 might have a slightly higher rating, nor for the word prendre where Group 3 has a slightly lower observed frequency.

The variant [en] for the word rentre seems to be more prevalent in Groups 3 and 4 than in 1 and 2, but this was not a significant difference.

Some occurrences can be explained in terms of individuals - three people who used the variant /$\tilde{\alpha}$n/ for rentre (two in Group 1, one in Group 2) used it for the prendre as well. A different person in Group 3 used it for both occurrences of comprends. The variant /$\tilde{o}$/ was used by one person in both occurrences of comprends in Groups 2, 3 and

4, and person in Group 4 using /õ/ also for attention and ans, and accounting for the total frequency of /õ/ in this group. Thus three people account for all but three of the 11 occurrences of /õ/.

It was also observed that a person would sometimes give two different renderings to the /ɑ̃/ of comprends, particularly in Groups 1 and 3, compared with groups 2 and 4. Groups 1 and 3 are both groups with previous experience of French, which may have been an influencing factor. However, groups 1 and 4 have a higher number of "creations" than the other two groups, and these two have no factors in common, and it does not seem possible to isolate any influencing variable.

There is not a great difference in the number of variants used by each group, on the whole the pattern being very nearly the same for all groups, and one could expect all groups to make the same sort of errors as did the whole sample.

VARIANTS OF /$\tilde{\alpha}$/

	✓	ɒn	en	$\tilde{\alpha}$n	αn*	e	æn	ɒŋ	$\tilde{\varepsilon}$	$\tilde{o}$	æ	$\tilde{ɒ}$n	ɔ:n	a:n	-	M	IC	Number of Variants
GP 1 AE																		
rentre	2	11	1	2									1			ɒn	ə	6
prendre	3	12		2												ɒn	In	4
comprends	2	9	3			1		1	1			1				ɒn		7
" "	3	4	2			1		1	1			1	1		2	ɒn	Λn, $\tilde{\varepsilon}$ŋ	11
attention	7	3	8													en		3
chanteras	1	9		1	6						1					ɒn		5
chanson	2	3		2	1	3	4				1					æn	a, ai	9
ans	9	3		1	3									1		✓	ɒ	6
GP 2 AN																		
rentre	1	15	1													ɒn		3
prendre	3	13	1													ɒn		3
comprends	4	7	2					2		3						ɒn		5
" "	6	7	2					1		1						ɒn		5
attention	6	2	7						1	1						en		6
chanteras	1	13			2											ɒn	α	4
chanson	4	2			5	3	2			1	2					αn		6
ans	11	3		1				1						1		✓		5

	√ ɒn	en	œ̃n	œn*	e	æn	ɒŋ	ɛ̃	õ	æ	ɒ̃n	ɔ:n	ɑ:n	–	M	IC	Number of Variants
GP 3 NE																	
rentre	2 15	5	1												ɒn		4
prendre	5 11	4	1								1	1			ɒn		6
comprends	3 8	5	1		1		1		1		2				ɒn	ɒ̃	9
" "	6 7	5	1				1		1		1				ɒn	es	8
attention	1 4	14		1		2		1		2					en		6
chanteras	12		4	2		3				3					ɒn		5
chanson	5 7				1	5		1		5					ɒn		6
ans	8 10		2	2				1							ɒn		5
GP 4 NN																	
rentre	4 15	4							1						ɒn		4
prendre	6 15	2							1						ɒn		4
comprends	3 11	4			1		2		1		1				ɒn	†	8
" "	2 9	5			1		3		1		2				ɒn	oᵘ	8
attention	4 2	16							1		1				en		5
chanteras	3 11		3	3		4				4					ɒn		5
chanson	7 6			1	2	5				5	1				√		7
ans	8 8		1	4			1		1						√/ɒn		7

	✓	ɒn	en	ɑ̃n	ɑn*	e	æn	ɒŋ	ɛ̃	õ	æ	ɐ̃n	ɔ:n	a:n	–	M	IC	Number of Variants
TOTAL																		
rentre	9	56	11	3						1			1			ɒn	1	6
prendre	17	47	7	3						1		1	1			ɒn	1	7
comprends	12	35	14	1		3		6	1	1		4				ɒn	2	9
" "	17	27	14	1		2		6	1	1		4	1		2	ɒn	4	11
attention	18	11	45		1		2		2	2	2	1				en	1	9
chanteras	5	45		7	13		7				7					ɒn	2	6
chanson	18	18		2	7	9	14		1	1	14	1		2		✓/ n	1	11
ans	36	24		5	9			2	1	1						✓		7
TOTAL	132	263	91	22	30	14	23	14	6	8	23	11	3	2	2		12	

*or /an/, or /ɑ:n/

†kɒndrə

THE PHONEME /õ/

The most popular variant for õ was again the New Zealand open [ɒ] + nasal consonant (either /n/ or /m/), occurring about one and a half times as often as the correct version, which ranked second. Apart from other features, namely oral-ness, and the addition of a nasal consonant, this is a more open sound than the French /õ/, being more in the region of /ɑ̃/, and hence likely to be confused with it. In addition, it is the same variant as was found most popular for /ɑ̃/, which indicates that the distinction /õ/:/ɑ̃/ is not in general being made.

It is also noted that /õ/ was far less often produced when it was required in the first syllable than in final or mono-syllables. This may be due to the fact that in the word comprends, where /õ/ occurs in the first syllable, the lips come together to form the /p/, and an early voicing of /p/ can easily become an /m/. On the other hand, it may simply be because it is not realised that 'om' represents a nasal vowel, when followed by 'p' or 'b'. The influence of spelling can also not be disregarded in such substitutions as the above.

All other variants occurred with far less frequency. [ɒŋ] occurred, as it had for /ɑ̃/, five people using /ɒŋ/ for both /ɑ̃/ and /õ/ on occasions. Remarks about

open-ness above, and about the velar nasal with respect to /ɑ̃/ also apply.

/õ/ + cons. was used with about the same frequency. This seems to be a spelling-influenced error, as the nasal vowel is articulated as it should be, but the consonant, either /n/ or /m/ is also heard.

[ɒ̃] + cons. This is also of about the same frequency. Again it was used for /ɑ̃/ as well, by five people, and seems to indicate a failure to distinguish between nasals. Because of its open-ness it may be confused with the French /ɑ̃/.

[ɒ] without a consonant was used, about half of the occurrences being for the word <u>on</u>. This is more open than required, and not nasal, and is the sound one associates with the 'o' spelling in English 'on', or 'om', which may account for its use.

[ɒ̃] Similarly, this sound is more open than required, and is a nasalised version of the sound associated with the spelling (in English) 'on' or 'om'. As mentioned above, its openness may lead to its being confused with /ɑ̃/.

/ɑ̃/ A confusion of nasals has led to this error, which was found in all words except <u>bon</u> and <u>fond</u>. The familiarity of these two words is the only suggested reason for their exception.

/ə/ + cons. -[əm],[ən]. The reduced or 'schwa' form of a

vowel, often realised /ə/, is typical in an English unaccented syllable[5], and the use of these variants in the words comprends and attention respectively suggests that they were both treated rather like English words, given a strong and weak syllable, and the vowel of the latter reduced.

Of infrequent occurrence were the variants /u/ and [ou], or no realisation, which suggest reading errors, of little interest in this study.

chanson and fond. For both these words the correct form was preferred by approximately half the sample. Familiarity cannot be offered as a reason, as bon is probably even more familiar than most.

The number of variants, excluding 'creations' is about the same for all words.

Intergroup Comparison

The pattern is largely the same for all groups, but two significant differences were found. Group 2, in the rendering of bon were correct significantly more times than the other three groups at the .02 level, indicating that pupils with no previous experience and taught by audio-lingual methods are more likely than others to render this word correctly.

In the realisation of the /õ/ of comprends (both occurrences combined), Group 4 had significantly fewer correct responses than the other groups, also at the .02 level, from which one could predict that pupils taught by traditional methods, and with no previous experience would be more likely to make errors in this word than those of other groups.

The variant [ɔ] for /õ/ occurs mostly in Group 1, where three people used it twice, but the other five occurrences are scattered throughout the sample.

A pupil's use of [ɔ̃] and [ɔ̃] in Groups 3 and 4 usually occurred in both the words on and bon but in no other. The other occurrences of these phones were produced by other pupils. In Groups 1 and 3, [əm] was used by one person of each group for both occurrences of comprends. /ɑ̃/ in Group 1 was used by one person for both occurrences of comprends, and one person in Group 2 used it for both attention and chanson. [ɔ̃m] was used by one person in Group 1 and one in Group 3 for both occurrences of comprends, whilst [ɔ̃n] was used by one person in group 4 for both chanson and fond.

Otherwise variants are scattered among all pupils, each individual using several, although some exercise a preference for one form (e.g., all correct, or all [ɔ] +

consonant. Group 2 seems to have fewer variants than the rest for the word comprends, but the numbers of variants for other words are much the same for all groups.

In general, it would seem that one could expect pupils from all groups to make similar mistakes, following the pattern for the total sample.

VARIANTS OF /õ/

GP 1 AE	✓	ɒn	ɒm	ɒŋ	ɒ̃	✓+cons	ɒ	ɒ̃n	ɒ̃m	ɑ̃	ən	əm	–	u	ou	M	IC	Number of Variants
on	7	7					4									✓/ɒn		3
bon	5	7		2			3						1			ɒn		5
comprends	3		12						1	1		1				ɒm		5
" "	4		9						2	1		1	1			ɒm		6
attention	4	8				1		1		1	1		2			ɒn		7
chanson	12	4				1			1							✓		4
fond	12	3		1	1	1										✓		5

GP 2 AN																		
on	7	6		1	1				1							✓	ɯ̈	6
bon	10	4		1	1										1	✓		5
comprends	3		14													ɒm		2
" "	2		15													ɒm		2
attention	5	9							1	2						ɒn		4
chanson	9	4		1		1			1							✓	ɛ̃	6
fond	8	4		1	1	2									1	✓		6

	✓	ɒn	ɒm	ɒɔ̃	ɒ̃	✓+cons		ɒ	ɒ̃n	ɒ̃m	ɑ̃	ɑn	ɑm	-	u	ou	M	IC	Number of Variants
GP 3 NE																			
on	9	9		1	1			1	1						1		✓/ɒn		7
bon	5	12		2	1	2											ɒn	o	6
comprends	4		16					1		1			1				ɒm		5
" "	4		15			1					1	2					ɒm		5
attention	5	14			1			1	1								ɒn	e	6
chanson	12	8			1				2								✓		4
fond	11	8		2					1								✓	ɴn	5
GP 4 NN																			
on	7	13		2	1												ɒn	ɑ	5
bon	5	15		3	1												ɒn		4
comprends	1		21							1				1			ɒm		4
" "	1		21							1			1				ɒm		4
attention	8	12							2			1					ɒn	ɑn	5
chanson	12	8				1			3								✓		4
fond	10	7				6		1									✓		4

	✓	ɒn	ɒm	ɒɔ̃	ɔ̃	✓+cons		ɒ̃n	ɒ̃m	ɑ̃	æn	æm	-	u	ou	M	IC	Number of Variants
TOTAL																		
on	30	35		4	3			5	1	1				1		ɒn	2	8
bon	25	38		8	3	2		3						1	1	ɒn	1	8
comprends	11		63					1		3	1		2	1		ɒm		7
" "	11		60			1				3	2		4	1		ɒm		7
attention	22	43			1	1		1	4		2	4		2		ɒn	2	9
chanson	45	24		1	1	3			5		2					✓	1	7
fond	41	22		4	2	9		1	1						1	✓	1	8
TOTAL:	185	162	123	17	10	16		11	11	6	8	4	6	4	2	2	7	

CONTRAST /ɑ̃/:/õ/

There seems to be little clarity among pupils as to the nature of this contrast in French. No person made the /ɑ̃/:/õ/ contrast consistently over the four test items, one made it three times, five made it twice, and 13 made it once, which gives a total of 19 pupils, out of 82.

However, the number of identical renderings for /ɑ̃/ and /õ/ was in very similar proportions. Nobody confused them consistently (rendering both as /ɑ̃/, /õ/, [ɒn] or some other variant), one did three times, five did twice and 18 did once, making a total of 24. Only three of those who made the contrast on one or more occasions also pronounced the two phonemes identically on another occasion.

This means that the majority of people made a contrast of some kind. Mostly these were of the type [ɷm]:[ɒn] or [ɒm]:[en] for comprends (/õ/:/ɑ̃/); [en]:[ɒn], [en]:/õ/ for attention; and [æn]:[ɒn], [æn]:/õ/, [ɒn]:/õ/ for chanson. The intelligibility and acceptability of most of these contrasts is very doubtful.

The word chanson had the same number of correct distinctions as non-distinctions - 12. Attention had many more identical forms than correct contrasts - 14:5. Comprends had approximately the same number of both - an average of about 5 each.

There were no significant intergroup differences, and it seems clear that most pupils are not sure of the quality of the nasal vowels, nor of the distinctions between them.

CONTRAST - ORAL VOWEL:NASAL VOWEL

Only a minority of pupils made this distinction for each vowel, and only eight pupils, from all groups, made the distinction for both examples. Some made the oral: nasal distinction, but added an extra consonant, e.g. fond became /fõd/, ans became /ɑ̃nz/ - these have been indicated by /✓⁺/ on the table. Three people (from Groups 1, 2 and 3) pronounced Anne as [æn] - as in English, and contrasted this with /ɑ̃/, but since there were so few who did this, the number was included in the total for the contrast made.

In the /ɔn:/õ/ contrast, a large number made no distinction at all, making both phonemes either /õ/, [ɒn] or some other form (indicated by X), and more made a distinction merely by adding a consonant that should not have been there, (e.g. [ɒn]: [ɒnd]), (indicated by XC). A few reversed the contrast, making bonne /bõ/, and fond [fɒn], or had the vowel of bonne /õ/, in contrast with some other vowel, e.g. [ɒ]. This is indicated by 1=õ. A few others had [ɒŋ] in contrast with either /õ/ or [ɒn], indicated by

[ɒɔ]. It may be seen that over half the sample made either no, or little distinction between these two items, indicating a general confusion between oral vowels with nasal consonants, and nasal vowels.

More pupils made the other contrast correctly although some added an extra consonant as previously. Of those who made no distinction, or the wrong distinction, most were of the type [ɒn]:[ɔn], /an/:[ɒn] or [æn]:[ɒn]. However, again less than half the sample made this contrast.

Intergroup Comparison

/ɔn/:/õ/. Mostly patterns were the same for each group, but one significant difference was found: Groups 1 and 4 had a higher frequency of correct or nearly correct contrasts than Groups 2 and 3, at the .01 level. Why this should be remains a mystery to the writer.

/ɑn/:/ɑ̃/. No significant differences were found, although Group 4 seems to have fewer correct or nearly correct contrasts than the other groups. This, it may be noticed, is different from the tendency shown in the /ɔn/:/õ/ contrast.

Table

/ɔn/:/õ/	✓	✓+	X	XC	1=õ	ɒŋ	other
Group 1	9	1	6	1	0	1	
Group 2	1	1	11	2	1	1	
Group 3	3	1	14	1	2	1	/ɔn/:/un/
Group 4	8	3	6	4	1	1	[ɔŋ]:[ɒn]
TOTALS:	21	6	37	8	4	4	

œn:ã	✓	✓+	X	WD*	other
Group 1	8	0	5	2	3
Group 2	11	1	1	2	2
Group 3	9	2	2	9	3
Group 4	5	1	7	6	5

*Wrong distinction: [æn], /œn/, /an/:[ɒn(z)] only. The rest come under "other".

SECTION TWO: PHONETIC ERRORS

THE PHONEME /i/

The most frequently occurring variant for this phoneme was a lowered C[i], not, as might have been expected, a diphthong with a central starting point, which was, in fact, of infrequent occurrence. This phone occurred about one and a half times as frequently as did the French /i/. Since the main difference is in point of articulation, not diphthongisation or phonemic confusion, it is probable that this realisation would be acceptable, if "different" to a French speaker.

Far less acceptable however, is the next most frequent variant, [I]. The English phoneme /I/ does not exist in French, but the occurrence of a spelling which in English would be pronounced with this phoneme causes interference when the student substitutes the sound he is used to using in the native language. This happened particularly in the word difficile, where five-eights of the sample used it in the first syllable, and over a quarter in the second, but it occurred in all other words except depuis.

A diphthong with the starting point at lowered [i], and gliding towards a central position is found with the words mille and difficile. This is predictable, as the 'dark' pronunciation of 'l' no doubt causes an off-glide, much as it does in the New Zealand pronunciation of alps -

/ɛəɬps/ noted by Turner[6], and it would be expected to find the use of dark [ɬ] instead of clear [l] with New Zealand Third-formers learning French. Less predictable is the use of the same variant in the word aussi. Perhaps the fact that this occurred at the end of a sentence caused pupils to 'drawl' out the last syllable, and as the tongue and lips relaxed an off-glide was produced.

The diphthong [əi], given by Turner as a form occurring in New Zealand English, was found infrequently in monosyllables or final position, where 'l' was not present. It seems as if the presence of 'l' may influence the realisation of this phoneme. If the [əi] variant was used for the first element, the variant before (dark) 'l' would be a hypothetical [əiə], which is likely to sound too drawled.

[ɛ] and [e] probably arise from a mistaken conception of the phoneme involved, as they seem neither to be suggested by the spelling nor caused by phonemic differences in the two languages.

difficile: The final syllable of this word was subject to other distortions in addition to those mentioned above. The diphthong [aɪ], as in mile was used, presumably a spelling-influenced error; and the substitution of [ʏ] as in the English word difficult was also found. The use of [e] perhaps originates in a mistaken conception of what sound was required. The use of [ʌ] may have been a reading error, at the same time associated with the English word,

which has a 'u' in this syllable (difficult). A number of people also rendered the second syllable of difficile as it occurs in the English word - the schwa form /ə/.

depuis: A number of other errors also characterise this word. Of equal occurrence were /wa/, [jü] and [ü]. /wa/ may result from a confusion with the French spelling 'ois'; /jü/ and /ü/ seem to have been influenced by the spelling, which is not very common in English, but occurs in such words as nuisance and juice, which are generally pronounced in R.P. with a [ju] and [u] respectively, and are likely in New Zealand English to be modified to [jü] and [ü]. (Build is an exception[7].)

dix: This was occasionally rendered /dø/, which is the pronunciation of deux. This may perhaps be a reading error, or may stem from a centralised realisation of /i/.

The majority of words seem to have only four or five variants. Difficile, depuis and aussi have more than the rest, but three of the variants for aussi occur only once in the sample, and if these are excluded, the number of variants for aussi is also five.

Intergroup comparison

No significant differences were observed between the four groups. The frequency of correct realisations of mille

seems slightly higher in Group 3 than in the others, but the difference was not significant. The number of occurrences of /i/ (French) in the last syllable of *difficile* seems a little higher than expected for Group 3, and a little lower for Group 4, but neither of these differences was found to be significant.

The occurrence of [I] for the first syllable of *difficile* is a little more frequent in the non-audio-lingual groups (3 and 4) than in the audio-lingual ones (1 and 2), but this again was not significant.

Variants used in a word by only one group are more prevalent in Groups 1 and 4, but numbers are so small that this is of interest only, and not significant.

There were few individual patterns, although the variant [iə] in *mille* (but not always in *difficile*) was preferred almost exclusively by the pupils of four teachers.

There are no outstanding intergroup differences in the numbers of variants for words or in the number of 'creations'. Intergroup differences in the most common variant for words were not created by a large enough margin to be significant. Thus we may conclude that pupils of all groups are likely to make the same errors, following the pattern of the total sample.

VARIANTS OF /i/

GP 1 AE	✓	i*	iə	I	ə	e*	e^{i}	^{ə}i	əI	ʌ	ø	wa	ɤ	jü	ü	M	IC	Numbers of Variants
six	7	10														i*	(sept)	3
mille	2	4	9	3												$i^{ə}$		4
dif	5	4		8	1											I		4
fi	6	5		3	2					1						✓	-	6
cile	5	1	5	1		1	1			2	1					✓/$i^{ə}$	ie	9
aussi	3	10	1				2		2							i*		5
dix	5	12									1					i*		3
depuis	1	15										2				i*		3
GP 2 AN																		
six	6	11														i*		2
mille	4	3	8	2												$i^{ə}$		4
dif	4	4		9												I		3
fi	3	6		6	2											i*/I		4
cile	5		6			1				2	1		2			$i^{ə}$		6
aussi	1	13	2													i*	^{ə}i	4
dix	4	12									1					i*		3
depuis		11					1							2	2	i*	ɒ	5

	✓	i*	iᵊ	I	ə	e*	e¹	ᵊi	əI	ʌ	ø	wa	ɤ	jü	ü	M	IC	Number of Variants
GP 3 NE																		
six	9	10		3				1								1*		4
mille	8	3	8	4												✓/iᵊ		4
dif	6	1		16												I		3
fi	6	7		7	3											i*/I		4
cile	11	2	6	2					1				1			✓		6
aussi	8	11	1		1	1		1								i*		6
dix	9	12						1			1					i*		4
depuis	7	5			2		2	3				1		2		✓	u	8
GP 4 NN																		
six	7	12		2		1			2							i*		5
mille	4	3	12	5												iᵊ		4
dif	4	3		17												I		3
fi	4	10		8	2											i*		4
cile	4	4	10	1	1	3							1			iᵊ		7
aussi	3	16	4	1												i*		4
dix	8	15		1												i*		3
depuis	2	11	1				1					2		1	3	i*	ɔ:, jüə, ɚ:	10

	✓	i*	iᵊ	I	ə	e*	eⁱ	ᵊi	əI	Λ	ø	wa	ν	jü	ü	M	IC	Number of Variants
TOTAL																		
six	29	43		5		1		3								i*	1	5
mille	18	13	37	14												iᵊ		4
dif	19	12		50	1											I		4
fi	19	28		24	9					1						i*	1	5
cile	25	7	27	4	1	5	1		5	2			4			iᵊ	1	10
aussi	15	50	8	1	1	1	2	3								i*	1	8
dix	26	51		1				1			3					i*		5
depuis	10	42	1		2		4	3				5		5	5	i*	5	9
TOTAL:	161	246	73	99	14	7	7	10	5	3	3	5	4	5	5		9	

i* lowered c[i].

e* New Zealand realisation of /e/

THE PHONEME /e/

This phoneme is characterised by a large number of variants with a fairly high occurrence, and no constant overall substitution of a single phone. The phone of highest overall frequency was that of the New Zealand realisation of /e/ (as in head) which although closer than the R.P. phone, is less tense than the French sound. The French realisation and a slight closing diphthongal glide from a lower position than [e], but symbolised by [e^{i}] were both of a similar frequency, occurring less often than [e] but more often than the other variants. This phone is written such to distinguish it from a much more definite diphthong [ei] which occurred occasionally, mostly in the final syllable of préférez, and is the phoneme probably used by educated New Zealanders in the word day , when spoken at conversational speed. It is interesting to note that the diphthong described by Turner as the Australian equivalent of R.P. [eI], namely [ʌI] did not occur at all.

Other variants occurred only in particular words or syllables. /i/ was found particularly in pré, of préférez, théâtre) and lé (of télévision). These seem to be a direct carry-over from the pupils' pronunciation of the English words - prefer sometimes has a first syllable with /i/, and this is often used in theatre, and television also.

/ə/ occurs in pré, fé, rez and lé, mostly, and is the phoneme characteristic of an English unaccented syllable. It would seem as if the pupil has given these words an English stress, and consequently rendered the vowels in their (English) reduced form.

The symbol [-] denotes the fact that no sound was uttered, and occurred with such pronunciations as prefer (the English word) for préférez, and in particular the form /et/, or [eˈt] for été, where the final syllable was omitted. The form [ə:] is limited mainly to the second syllable of préférez, and is the English pronunciation of the second syllable of prefer.

[ʌ], [I] and [æ] occur almost exclusively in the word télévision. /tʌ/ and /tæ/ are both New Zealand pronunciations of the first syllable of the English word. In fact the phone represented by [e] was, in the word télévision a phone closer to [æ] than in the other words, probably due to the influence of [l], but possibly also a feature of New Zealand speech. [I] may be a 'careless' English pronunciation in the syllable té. In the syllable lé, [ʌ] is, in the writer's opinion, a New Zealand pronunciation of this syllable in the English word.

Clearly the choice of variant used depends on the word it is used in, and seems also to be influenced by the

existence of similar English words, or the imposition of English patterns. True /e/, and New Zealand [e] and [eⁱ] which are both probably intelligible, account for the majority of variants, but there still remain a large number of alternatives, and the most common variant is not always one of these three.

In pré of préférez, the /ə/ form was most prevalent, and /i/ was of a reasonable occurrence, the two accounting for over half the realisations. Both are obviously influenced by the English word. In the second syllable, [ə:] was a very widespread variant.

The word théâtre had only four variants, two of which seem clearly influenced by the English words, but the number was fewer than for all other words, which seemed to have about six or seven. Similarly té and lé seem to have been pronounced with more regard to the English pronunciation than to the French.

The word été differs from all the others. There is no English word of a similar form, and it may be for this reason that in the first syllable /e/ (French) had a higher occurrence than any other variant, with the nearest English form [eⁱ] also of high occurrence. Yet in the second syllable more people omitted the phoneme altogether than chose any other form. 16 of these omissions were

made by the pupils of three teachers, but this still leaves approximately 20 such omissions scattered throughout the sample. Quite why pupils should opt for the form /et/ or [e^{i}t], (English ate) is beyond the comprehension of this writer.

Intergroup Comparison

No significant intergroup differences were found, and it seems as if pupils from all groups are likely to make the errors described above, in approximately the same proportions.

VARIANTS OF /e/

GP 1 AE	✓	e*	e^i	i	ə	-	ə:	ei	ʌ	I	æ	M	IC	Number of Variants
pré	4	5		3	6							ə		4
fé		10			3		5					e*		4
rez	3		11			2		2				e^i		4
théâtre	3	10		5								e*		3
té	3	11							3		1	e*		4
lé	3			8	5				2			i		4
é	6	4	3	1		1						✓	əü, au, je	8
té	7		3			8						-		3
GP 2 AN														
pré	5	3	2	1	6							ə		5
fé	1	9	1		3	1	2					e*		6
rez	3		12		1	1						e^i		4
théâtre	3	4	1	9								i		4
té	3	13										e*		3
lé	1		1	6	7				2			ə		4
é	3	6	7	1								e^i		4
té	3		3			11						-		3

	✓	e*	e^{i}	i	ə	-	ə:	ei	ʌ	I	æ	M	IC	Number of Variants
GP 3 NE														
pré	1	4	1	5	10	1				1		ə		7
fé		13			2		8					e*		3
rez	5		12	1	1	1		3				e^{i}		6
théâtre	2	10		11								i		3
té	3	19								1		e*		3
lé	1			12	10							i		3
é	9	4	5	2			1	2				✓		6
té	8		6			8		1				✓/-		4
GP 4 NN														
pré	4	5	4	1	10							ə		5
fé	1	12	1		3		7					e*		5
rez	5	1	17					1				e^{i}		4
théâtre	4	9	1	10								i		4
té	3	18	1						1	1		e*		5
lé	4		1	13	4				1	1		i		6
é	6	3	12	3								e^{i}		4
té	6		9		2	7						e^{i}		4

	✓	e*	e^{i}	i	ə	-	ə:	ei	ʌ	I	æ	M	IC	Number of Variants
TOTAL														
pré	14	17	7	10	32	1				1				7
fé	2	44	2		11	1	22					e*		6
rez	16	1	52	1	2	4		6				e^{i}		7
théâtre	12	33	2	35								i		4
té	12	61	1						4	2	2	e*		6
lé	9		2	39	6				5	1		i		6
é	24	17	27	7		1	1	2				e^{i}	3	7
té	24		21		2	34		1				-		5
TOTAL:	113	173	114	92	73	41	23	9	9	4	2		3	

*New Zealand realisation

THE PHONEME /o/

The overall pattern shows the correct realisation of this phoneme as that with the highest frequency. However, as there are a considerable number of variants, this does not mean very much, and only for one word (autre) did more than half the sample realise the phoneme thus.

The most common substitutes were, firstly a diphthongal glide with a starting point in the region of that described for R.P. by Daniel Jones[8], and for conservative R.P. by Gimson[9], that is, with a tongue-position more forward and lower than for c[o], and a lip-position of medium rounding. The glide is towards the centralised [ʉ] position, and the phone is symbolised by [o^{ʉ}]. The tongue-position and degree of lip-rounding are both different from those of the French vowel, in addition to the gliding aspect, but it seems to be the nearest English (or New Zealand) substitute. A much slower and more definite diphthong with the same starting point, and finishing nearer the [ʉ] position was also common, and is symbolised by [ou]. Another diphthong with the same starting point, but moving only to the position of [ɤ] which means that the whole diphthong is in the vicinity of /o/, also occurred, but it is noticed that eight out of nine of its occurrences were by pupils of one teacher.

Open [ɒ] was also substituted, particularly in the first syllable of two-syllable words with a spelling 'au'. It is suggested that this might be influenced by the spelling, 'au' often being pronounced /ɒ/ in an English first syllable (c.f., sausage, Australia, cauliflower). The comparatively few occurrences of [ɒ] with the words au, eau may perhaps be attributed to the non-existence of any such form in English (whereas /ou/ is a word, (oh), or a letter, (o)), so that it would not be natural, to English speakers, for the vowel to stand on its own. Nor does /ɒ/ occur in a final open syllable in English[10], which may help to account for so few occurrences in the word bureau.

[ɔ:], which is substituted a number of times in the word autre, fewer in the words aussi and au, is articulated in a position close to French [o]; is also represented in English by the spelling 'au' (daughter, cause), and it may stand alone (the word or). /a/ which may also be spelt 'au' in English (aunt, laugh) occurs once in the word aussi, but a number of times in the word au. This may, however, merely be a reading error, mistaking au for a.

A number of variants in the region of /u/, namely [u], [ü], [jü] also occurred, particularly in the word eau. This appears to be influenced by the spelling (eau = /ü/ in beautiful). The same influence may have been exerted

in the words spelt with au, even though there is one less letter. The word chose, on analogy with English lose, could be expected to have been given this pronunciation, but it occurred twice only.

The variant [ei] in bureau and eau does not have any apparent reason to recommend it, unless the first two letters are given an English pronunciation modelled on the type great, break.

The correct realisation was more frequent than any other variant in all cases except bureau and eau. Yet only in the word autre was it made by more than half the sample; in aussi and au slightly less than half the sample realised it this way; for the word chose the proportion is 1:3, (right:wrong), for bureau about a quarter rendered French [o], and for eau, less than this.

In most words, a large majority of the sample used variants which it is speculated would be intelligible, if not always 'acceptable' to the French ear, but the word eau was given fifteen different renderings in all, only four of which seem anything like /o/. The other eleven variants were used by about one third of the sample, so that it seems that even familiar and simple words like eau, or au can cause difficulty to a reasonably large number of students.

Intergroup Comparison

The pattern for all groups is much the same, with one significant difference being noted. This was the frequency with which /o/ in the word aussi was rendered correctly by Group 2, which was significantly lower than by the others, at the .01 level. The frequency of this realisation in the word chose also seems lower for this group, but this is not a significant difference.

Two people in Group 3 used [ɒ] for autre, chose and aussi, but otherwise use of this form seems to be scattered throughout the sample. One person in Group 3 used the form /u/ three times, but other occurrences are single ones.

With the exception of Group 4, in the word eau, inter-group differences in the most popular variant are slight and it seems as if pupils from all groups are likely to make the same mistakes.

CONTRAST o:ɔ

A large proportion of the sample made this contrast, with either [o], [o^{u}] or [ou] for /o/, and usually [ɒ] for /ɔ/. However, the distinction was at least made.

Only 17 times out of the three repetitions of the contrast was no contrast made, and only two of these were by the same person.

Usually when mistakes were made, only one element was wrong - only six times were both wrong, and /ɔ/ was rendered inadequately about twice as often as /o/.

Mistakes made in the /o/ part of the contrast may be seen from the table given for the phoneme /o/. The main alternative given was [ei]. The most frequent substitution for /ɔ/ was the nasal, /õ/, in the first two examples (the words bonne and donne), and in the second example (soleil) /ə/ and /u/. Any other substitutions occurred only once.

Intergroup differences were only minor, and it seems as if most pupils from all groups are clear as to when /o/ and /ɔ/ are used.

VARIANTS OF /o/

GP 1 AE	✓	o^{u}	ou	ɒ	ɔ:	ə:	ʉ	u	a*	ei	oʏ	əu	jə:	jʉ	M	IC	Number of Variants
bureau	5	6	3	1						3					o^{u}		5
autre	8	3	1	2	2						1	1			✓		7
chose	8	2	4			1		1				2			✓		6
aussi	8	5		3	2										✓		4
eau	5	3	1			4	2			1			1		✓		8
au	9	4	1	1		1			1	1					✓		7
au	7	3	5	1											✓	-, $\tilde{\alpha}$	7

GP 2 AN																	
bureau	2	8	5	1						1					o^{u}		5
autre	9	4	1	1	2										✓		5
chose	3	5	8				1								ou		4
aussi	3	6		6				1	1						o^{u}/ɒ		5
eau	4	8	1			3								1	o^{u}		5
au	7	6		1					1						✓	õ, ʔ	6
au	8	6			1		1		1						✓		5

	✓	o^{u}	ou	ɒ	ɔ:	ə:	ʉ	u	a*	ei	o^{ʏ}	əu	jə:	jʉ	M	IC	Number of Variants
GP 3 NE																	
bureau	7	4	6	1			1			2	2				✓		7
autre	13	1		6	3										✓		4
chose	9	2	7	2				1			1	1			✓		7
aussi	14	1	1	5				2							✓		5
eau	5	4	4			4					2		1		✓	ɛ, əːə, ɒn	9
au	10	7	1				1	1			1				✓	ʏn, ʌ	8
au	14	4					1	2	1		1				✓		6
GP 4 NN																	
bureau	7	7	9												ou	e	4
autre	14	4	1	2	2		1								✓		6
chose	9	3	7	3			1				1				✓		6
aussi	15	1	2	5	1										✓		5
eau	2	12	2			4		1					1	1	o^{u}	y	7
au	14	7	1						1						✓	n	5
au	10	8	1	1	1				2						✓	œ̃	7

	✓	o^{u}	ou	ɒ	ɔ:	ə:	ʉ	u	a*	ei	oʏ	æu	jə:	jʉ	M	IC	Number of Variants
TOTAL																	
bureau	21	24	23	3			1			6	2				o^{u}	1	7
autre	44	2	3	11	9		1				1	1			✓		8
chose	29	12	26	5		1	2	2			2	3			✓		9
aussi	40	13	3	19	3			3	1						✓		7
eau	16	27	8			15	2	1		1	2		3	2	o^{u}	5	10
au	40	24	3	2		1		1	4	1	1				✓	5	9
au	39	21	6	2	2		2	2	4		1				✓	3	9
TOTAL:	229	134	72	42	14	17	8	9	9	8	9	4	3	2		14	

*or /ɑ/

R INITIAL

By far the greater part of the sample used the English continuant [r] in this position. About a fifth as many used an alveolar tap [ɾ] , which slightly resembles a trill, and is found sometimes in R.P. speakers in words such as very, sorry[11]. Still fewer produced the uvular French /R/, or a trill, both symbolised by ✓.

The proportions for each word were mostly the same, although rentre had fewer occurrences of [ɾ], and more English [r]s. Mostly the alveolar tap was scattered throughout the sample, although two people used it three times, and the same applied to a lesser extent to /R/, although one person used it consistently, two used it three times, and three used it twice.

Intergroup comparison

The pattern is almost the same for all groups, no significant differences being found. The three variants are all used in approximately the same proportions. Thus one would expect pupils from all groups to render initial 'r' as the English continuant [r], more often than not, sometimes as [ɾ], and less often as /R/ or a trill.

R INITIAL

Gp 1 AE	✓	r	ɾ	M	Number of variants
radio		12	6	r	2
rue	1	16	1	r	3
rentre	1	17		r	2
regarde	1	13	4	r	3
GP 2 AN					
radio		12	5	r	2
rue	2	12	3	r	3
rentre		16	1	r	2
regarde	1	13	3	r	3
GP 3 NE					
radio	1	16	6	r	3
rue	2	17	4	r	3
rentre	2	19	2	r	3
regarde	1	19	3	r	3
GP 4 NN					
radio	3	19	2	r	3
rue	2	20	2	r	3
rentre	1	21	2	r	3
regarde	2	19	3	r	3
TOTAL					
radio	4	59	19	r	3
rue	7	65	10	r	3
rentre	4	73	5	r	3
regarde	5	64	13	r	3
	20	261	47		

R INTERVOCALIC

Again the English continuant [r] was used in this position by the majority of the sample, the alveolar tap being used by about a third as many. A few also used the uvular /R/. However, this pattern applied only to bureau and Paris, where 'r' was obviously required to be pronounced. The 'r' pronounced in French during the articulation of the words sur une was omitted by the greater part of the sample. However, more variants occurred in this case. [r], which often occurs 'intrusively' in such cases in English[12], was used by fewer than a quarter of the sample; the alveolar tap was used with about the same frequency as the glottal stop, which is also used as a syllable marker in English, especially with careful speakers, where there is a danger of an intrusive /r/. The form /ə/, which in English is also used for the spelling 'r' (tour) was also used several times. In general it appears that English habits are applied to the French consonant.

Intergroup differences

No significant differences were found between groups. It was thought that Groups 1 and 2 might have scored lower on the count of uvular /R/ in Paris, but this difference

was not significant, nor was there a significant difference in the number of [r]s used in the word Paris by Groups 1 and 2. Thus it would seem that all groups have the same problems, in this position mostly a substitution of the English [r].

R INTERVOCALIC

GP 1 AE	✓	r	ɾ	-	ə	ʔ	MC	Number of Variants
bureau		14	4				r	2
Paris	1	10	7				r	3
sur une		3		14	1		-	3
GP 2 AN								
bureau	2	13	2				r	3
Paris	1	13	3				r	3
sur une		5		11		1	-	3
GP 3 NE								
bureau	2	18	3				r	3
Paris	4	12	7				r	3
sur une		2	2	14	1	4	-	5
GP 4 NN								
bureau	2	15	7				r	3
Paris	4	14	6				r	3
sur une		6	3	13	1	1	-	5
TOTALS								
bureau	6	60	16				r	3
Paris	10	49	23				r	3
sur une		16	5	52			-	5
	16	125	44	52	3	6		

R POSTCONSONANTAL

Most pupils substituted the continuant [r] in this position, as occurs in English, and although /R/ was the next most popular pronounced variant, only a seventh as many used it. The alveolar tap was also used by a small number. There was a surprising number of cases where no consonant at all was pronounced. Only one person did this three times, several did twice, but mainly a pupil did it once only. The error usually occurred when a pupil either omitted the final syllable of a word (thus prendre became prend, autre became aut), or pronounced the syllable as in the English word centre, with an /ə/. The form [ɔ:] also occurred twice in quatre, but no reason can be suggested for this.

Intergroup comparison

By and large the pattern was the same for each group, but two significant differences were found. The audio-lingual groups had fewer correct renderings of /R/ in both syllables of the word prendre, at the .02 level, compared with the traditional groups, but on the other hand these groups also had significantly fewer occasions where 'r' was not pronounced at all. This latter fact seems more important than the former, as the omission of the final

syllable changes the meaning of words, or makes them non-sense syllables, and it would seem as if traditional classes are more prone to this type of error than the others.

R POSTCONSONANTAL

GP 1 AE	✓	r	-	ɾ	ə	ɔ:	M	Number of Variants
prendre		16		2			r	2
prendre		15	2	1			r	3
quatre	1	14	1		1	1	r	5
autre	1	15		1	1		r	5
GP 2 AN								
prendre	1	15		1			r	3
prendre	1	12	4				r	3
quatre	3	13	1				r	3
autre	2	12	2	1			r	4
GP 3 NE								
prendre	3	19	1				r	3
prendre	3	10	7	3	1		r	4
quatre	6	10	3	3	1		r	5
autre	2	17	3	1			r	4
GP 4 NN								
prendre	4	18	1	1			r	4
prendre	2	15	5	2			r	4
quatre	2	15	2	3	1	1	r	4
autre	2	17	2	3			r	4
TOTAL								
prendre	8	68	2	4			r	4
prendre	6	52	18	6			r	4
quatre	12	52	7	6	3	2	r	6
autre	7	61	7	6	1		r	4
TOTAL:	33	233	34	22	4	2		

R PRECONSONANTAL

The majority of the sample treated preconsonantal /R/ as if the words in which it occurred were English ones, and completely omitted it. A small number used uvular /R/, the alveolar tap [ɾ], and the glottal stop [ʔ], which have all been previously explained. In the word porte, more pupils used either /R/ or the other variants ([ɾ],[ʔ],[r]) than had in the previous words, just over half the sample still omitting the consonant, compared with over three-quarters for the previous two words. This indicates an awareness of the presence of the consonant in this case, perhaps because of familiarity with the word.

On an individual level, one person used /R/ three times, two used it twice, and the other occurrences were all single ones, scattered throughout the sample.

Intergroup comparison

There were no significant intergroup differences, and one may predict that pupils from all groups are likely to make the same errors, in particular to omit the phoneme altogether, on analogy with English.

R PRECONSONANTAL

GP 1 AE	✓	-	ʔ	ɾ	r	M	Number of Variants
partie		16	1	1		-	3
regarde	1	14	1	2		-	4
porte	4	10	1	3		-	4
GP 2 AN							
partie	1	14	2			-	3
regarde		15	1	1		-	3
porte	1	10	1	3	2	-	5
GP 3 NE							
partie	3	14	3	3		-	4
regarde	1	20	1	1		-	4
porte	5	10	2	6		-	4
GP 4 NN							
partie	1	22	1			-	3
regarde		24				-	1
porte	1	17	5		1	-	4
TOTAL							
partie	5	66	7	4		-	4
regarde	2	73	3	4		-	4
porte	11	47	9	12	3	-	5
TOTAL:	18	186	19	20	3		

R FINAL

/R/ was pronounced in final position more than in any other position, and although over 50% of the time no pronunciation at all was heard, /R/ occurred more than any other pronounced variant. [r] and [ʃ] were used by a small number, mostly in the words père and mouchoir

/R/ and /-/ were used equally often in the word vert, and approximately the same amount in père, but in the word mouchoir a majority did not pronounce final /R/.

Intergroup comparison

The pattern is approximately the same for both groups, although Group 4 seems to have a larger number of [r]s and [ʃ]s than the others. Mostly, however, one could expect a number of students from all groups to be able to pronounce final /R/, and most of the remainder to omit the sound.

R FINAL

GP 1 AE	✓	-	r	ſ	M	IC	Number of Variants
père	6	8	2	2	-		4
mouchoir	5	13			-		2
vert	5	12	1		-		3
GP 2 AN							
père	6	11			-		2
mouchoir	5	12			-		2
vert	11	6			✓		2
GP 3 NE							
père	11	10	1	1	✓		4
mouchoir	7	16			-		2
vert	14	6	1	1	✓	yod+R	5
GP 4 NN							
père	9	11	2	2	-		4
mouchoir	3	18	2	1	-		4
vert	6	13	2	3	-		4
TOTAL							
père	32	40	5	5	-		4
mouchoir	20	59	2	1	-		4
vert	36	37	4	4	-	1	1
TOTALS:	88	136	11	10		1	

R - GENERAL COMMENTS

As might have been expected, the most common pronunciation of 'r' in the various positions was usually that occurring in English - in initial, postconsonantal and intervocalic positions (English words radio, price, dairy), the continuant [r], in preconsonantal and final position (English port, far) no pronunciation. The one exception to this was in the sequence sur une, where the 'r' was treated as "final", and not pronounced by the majority.

/R/ or a trill was pronounced by a number of people, although seldom consistently, and its occurrence was of approximately the same frequency for all positions except final. This may be explained by the fact that /R/ tends to be easier to pronounce in final position. The writer has found that teaching university students the use of this phoneme is usually successful if one begins with /R/ occurring in final position, where most students can articulate it, then in a sequence retaining the same vocalic context where possible, so that it is only positional use which has to be taught, once the sound has been mastered. Thus, one might start with final /R/ in part, move to intervocalic (Paris), initial (riz, rit), and postconsonantal (prix). Preconsonantal /R/ is merely final /R/, with another syllable following, but students are so used to not pronouncing the letter in English, that the

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problem to be overcome here seems to be more one of habit-changing rather than articulation.

Since students in this sample showed a tendency to be able to pronounce final /R/, even though /R/ in other positions eluded them, it would seem that positional use, rather than articulation entirely, is a factor at Third Form level.

SECTION THREE: DISTRIBUTIONAL ERRORS

FINAL YOD

The symbols devised to represent the variants need explaining.

- ✓ full yod, or very nearly so
- ə not yod, but a move in this direction. A slight lengthening and centering of the final vowel. The second element of the diphthong is used to symbolise this variant.
- l substitution of /l/, (influenced by the spelling)
- \- no consonant, nor any attempt at one. This includes closing diphthongs.
- ✓+ yod plus a vowel and/or consonant, e.g. /e/ or /ent/, giving /je/, /jent/. The /e/ or whatever is added seems to correspond to a "pronunciation" of the last "syllable" - ent. (of travaillent.)
- əl a glide from the preceding vowel towards the centre, under the influence of 'dark' [ɫ].

In view of the fact that the linguistic problem of yod is merely one of distribution, fewer pupils than might have been expected rendered the correct phoneme. The predicted spelling influence also took place, but the majority of errors were of faulty articulation.

The overall pattern shows yod as being the most frequent, but the number of /ə/ occurrences is almost the same, and the number of spelling-influenced errors also close, so that there does not seem to be very much clarity among pupils as to what phoneme is required here. The number of zero occurrences /-/ is also notable. The [əl] variant, of infrequent occurrence, is an allophone of /l/, in the category of 'spelling-influenced' errors. The addition of another phoneme to travaillent and soleil do not alter the fact that yod was pronounced, but do alter the position of it, and it was yod in final position for which difficulty was forecast.

travaillent: the number correct is approximately the same as the number of /l/ substitutions, and there are surprisingly few occurrences of /ə/, or /-/, indicating that mostly pupils were either aware of the nature of yod, or completely misled by the spelling, although a number of pupils added an extra phoneme.

soleil shows a different pattern, which one would expect to be shared by other similar words (travail, pareil). The number of correct responses is greater than for any other single variant, but the forms /ə/ and /-/, which are each of approximately equal occurrence, when combined are more frequent than yod. Spelling exercises only a small

influence, accounting for about 12% of realisations. The occurrence of a form such as /sɷlijei/ accounts for the '√+' variant.

fille: This word is a particularly common one in the early stages of French, yet comparatively few pronounced it with a full yod, the majority opting for a diphthong. Few made no attempt at the phoneme, nor were many influenced by the spelling, despite the existence of words like mille /mil/ and ville /vil/ which are learnt concurrently. The main problem seems to be caused by uncertainty as to the quality of the phoneme required.

There seems, on some occasions, to be a connection between the teacher, and the pronunciation realised. Over a spread of five teachers, all pupils save one, i.e. 24 out of 25, gave the pronunciation /ə/ for the word fille, whereas pupils of the others alternated mostly between ✓, /ə/, or /l/. With respect to the substitution of /l/ in travaillent, over three teachers, 16 out of 21 pupils substituted /l/, whereas for another three teachers only 3 out of 22 pupils made this substitution. For the remainder of the teachers, about half the pupils realised /l/ and the other half yod.

Intergroup Comparison

Two significant differences were found in the intergroup comparison: more people in Groups 1 and 2 used the

diphthongised variant in soleil, compared with those in Groups 3 and 4, who tended to make more (although not significantly more) /l/ and /-/ substitutions. For the word fille, Group 1 had significantly more /ə/ substitutions than the other groups, at the .02 level.

Otherwise, patterns were very much the same for each group, and one could expect the same sort of realisations to be made by pupils of all groups.

VARIANTS OF YOD, /j/

GP 1 AE	✓	ə	l	-	√+	əl	M	IC	Number of Variants
travaillent	7	1	9		1		l		4
soleil	5	6	1	3	1		ə	-i,-ɛl	7
fille	1	15	1			1	ə		4
GP 2 AN									
travaillent	5		5	3	4		✓/l		4
soleil	7	6	1	3			✓		4
fille	3	9	2	2		1	ə		5
GP 3 NE									
travaillent	12		10	1			✓		3
soleil	9	2	4	5	1		✓	*(2)	7
fille	5	13	3	1		1	ə		6
GP 4 NN									
travaillent	9	1	10	1	2		l	s-	6
soleil	8	3	4	8	1		✓/-		5
fille	3	14	4	1		2	ə		5
TOTAL									
travaillent	33	2	34	5	7		l	1	5
soleil	29	17	10	19	3		✓	4	9
fille	12	51	10	4		5	ə		5
TOTAL:	74	70	54	28	10	5		5	

*/sɒlijei/

THE PHONEME /ʒ/

This phoneme was largely rendered correctly - in j'en it was always pronounced /ʒ/, je, jeune and déjeuner had only one or two deviant pronunciations, all of them a substitution of [dʒ], as would be expected, the letter 'j' being pronounced [dʒ] in English. Gens was subject to a little more distortion, [dʒ] and /g/ occurring four and five times respectively; genoux followed approximately the same pattern.

The more interesting observation occurs in the group comparisons. However, the distribution of [dʒ] and /g/ are interesting in themselves, as their use seems to be confined to individuals, rather than distributed throughout the sample. Seven people had two or more wrong, and these people made the same mistake each time, except for one person who had [dʒ] for je and gens, /g/ for genoux and /j/ for déjeuner.

It would seem that New Zealand students have little difficulty in producing this phoneme.

Intergroup comparison

Comparison of groups shows an interesting pattern; whereas the two audio-lingual Groups (1 and 2) are almost universal in their choice of /ʒ/, there is considerably

more diversity shown in Groups 3 and 4, where spelling seems to be an influence. However, very few pupils made errors, and there appears to be no real difference between the groups.

	VARIANTS OF /3/			
GP 1 AE	✓	dʒ	g	IC	Number of Variants
j'en	18				1
je	18				1
jean	18				1
gens	17		1		2
genoux	16		1	-	3
jeune	18				1
dejeuner	18				1
GP 2 AN					
j'en	17				1
je	17				1
jean	16	1			2
gens	16	1			2
genoux	17				1
jeune	17				1
dejeuner	17				1
GP 3 NE					
j'en	23				1
je	23				1
jean	21	2			2
gens	19	2	2		3
genoux	19	3	1		3
jeune	23				1

	✓	d3	g	IC	Number of Variants
GP 4 NN					
j'en	24				1
je	22	2			2
jean	23	1			2
gens	21	1	2		3
genoux	20		3	k	3
jeune	23	1			2
dejeuner	22	1		j	3
TOTAL					
j'en	82				1
je	80	2			2
jean	78	4			2
gens	73	4	5		3
genoux	72	3	5	2	3
jeune	81	1			2
dejeuner	80	1		1	2
TOTAL:	546	15	10	3	

SECTION FOUR: SPELLING INFLUENCED ERRORS

SPELLING C

(difficile)

A majority pronounced this letter as /s/, but there was still a large number who were influenced by the similar English word and rendered it as /k/. The intergroup comparison of this letter is particularly interesting.

Intergroup comparison

Groups 3 and 4 gave significantly more correct responses than did Groups 1 and 2, at the .01 level of significance. In addition, 50% of those making errors in Groups 3 and 4 were pupils of one teacher (out of 10 teachers), whereas in Groups 1 and 2 the distribution was very even.

It is possible that this word had not occurred in the audio-lingual course at this stage, and that it had in the other courses, which would account for these results. If, however, it had been dealt with by both, or by neither, there is little doubt that those taught by traditional methods performed better.

TABLE

C (difficile)		k	M	Number of Variants
Group 1	7	11	k	2
Group 2	7	10	k	2
Group 3	16	7	✓	2
Group 4	19	5	✓	2
TOTAL	49	33	✓	

SPELLING: CH

This letter sequence did not present a problem to many people, being pronounced /ʃ/ about 85% of the time. The English pronunciation [tʃ] was the most popular variant, /k/ also occurring, except in chose. /k/ was used once only by those who used it, with the exception of one pupil who used it twice, and the usage may perhaps be the result of a temporary confusion of the sound represented by the letters. /ʒ/, which is of minor occurrence in the word mouchoir, is merely a voiced /ʃ/.

There are few individual patterns, most people making only one error, some making two. The four pupils of one teacher rendered 'ch' as [tʃ] six times altogether, but this was the highest proportion of this kind - mostly errors were distributed fairly evenly among the pupils of all teachers, and it appears that the majority are aware of the French pronunciation of this spelling.

Intergroup comparison

The pattern is largely the same for all groups, although there are fewer occurrences of variants in Group 1 than in the other three groups. On the other hand, Group 1 is the only one where /k/ is used for the word mouchoir, and this was by pupils of different teachers. However, in

general, more pupils of this group than of other groups seem to have a clear idea of what sound is required.

CH

GP 1 AE	✓	t	k	ʒ	IC	Number of Variants
mouchoir	15		2		t	3
chose	15	3				2
chanteras	18					1
chanson	18					1
GP 2 AN						
mouchoir	16			1		2
chose	14	3				2
chanteras	14	2	1			3
chanson	13	2	2			3
GP 3 NE						
mouchoir	22	1				2
chose	20	3				2
chanteras	19	3	1			3
chanson	23					1

GP 4 NN	✓	t	k	ʒ	IC	Number of Variants
mouchoir	20	1		1	kj kw	5
chose	18	6				2
chanteras	22	1	1			3
chanson	22	2				2
TOTAL						
mouchoir	73	2	2	2	3	4
chose	67	15				2
chanteras	73	6	3			3
chanson	76	4	2			3
	289	27	7	2		

SPELLING - FINAL D

On the whole all groups handled final 'd' fairly well, although about a fifth of the sample were apparently led astray by the spelling. There were no significant inter-group differences, nor any apparent influence of teachers, with one exception, where six of the twelve pupils of one teacher pronounced final 'd'.

TABLE

(fond)		X	M	Number of Variants
GP 1 (AE)	12	6	✓	2
GP 2 (AN)	14	3	✓	2
GP 3 (NE)	18	5	✓	2
GP 4 (NN)	20	4	✓	2
TOTAL	64	18	✓	

SPELLING EU, PHONEME /ø/

The substitution of New Zealand /ə:/, since it is higher and more rounded than the English phoneme, is considered to be near the French phoneme /ø/, and has been counted as 'correct' for the purpose of this study. To distinguish the two would have served no practical purpose, especially in view of the hesitations in French between /ø/ and /œ/.

The majority of subjects rendered this sequence satisfactorily. However, those that did not had very many ways of not doing so. After the 'correct' version, the next most common overall variant was [ü], which is similar to the English rendering of the 'eu' sequence, which contains an additional yod - [jü]. Although the latter variant is not of high occurrence, the yod manifests itself in the unexpected combination /jø/, a mistake which is phonemic in French, as it changes deux to dieux, and veux to vieux. Feu, although not opposed to a form /fjø/, could easily be misheard as vieux, owing to the small difference between /f/ and /v/ and the listener's linguistic framework, which would make him expect to hear a form vieux, but not /fjø/. Thus this is an important error which should be avoided.

The form [øə] which was also prominent, seems to have arisen from a 'drawled out' New Zealand-type realisation, which produced a centring diphthong, unlikely to be acceptable to French speakers. The variant [e(:)] (English and sometimes lengthened) also occurred a number of times, possibly resulting from a reading error, as is probably also the case with the variant [eə]. One person seems to have read a 'u' as an 'n' in veut, producing the variant [en].

The variant [jʉ], mentioned above, could have been predicted to have a more frequent occurrence, but occurred only five times altogether, scattered throughout the sample. The central non-rounded vowel [ə] also occurred four times, two of these being offered by the same person, who, however, pronounced deux and veut correctly. Reasons for this substitution appear to be individual, as does the use of [ɒ], which appears only twice, in unrelated sections.

Although [ʉ] was the second most popular over-all variant, the words for which this was the case were two only - veux and veut. [øə] occurred more frequently in the word deux, which seemed to lend itself, perhaps because it stood alone, to diphthongisation. /jø/ was the most popular variant for feu, perhaps on analogy from feud, but modified to resemble more the French phoneme.

The number of variants for this phoneme, with the exception of its occurrence in the word deux, is astonishingly high. Considering variants with more than one occurrence the figures are 9, 10 and 9. Including those of individual occurrence, these figures become 13, 17 and 15.

Intergroup Comparison

A number of significant differences were found between various groups, but they do not lead to any definite conclusions. Groups 1 and 2 (Audio-Lingual) were correct significantly more times than Groups 3 and 4 (Traditional) for both deux and veux, the latter at .02 level. In fact, for the word veux, Group 3 had a frequency of correct realisations lower than the other three groups, significant at the .01 level. Group 2, for the word veut, had significantly more correct renderings than other groups, but for the word feu, no significant difference was found.

Group 4 has a higher frequency than the others for the variant [øə] in deux, and the six pupils were taught by five different teachers, so that it cannot be ascribed to any individual cause. Group 3, it will be noted, has many more 'creations' (viz. 14), than the other groups, and an extra recurring variant, /u/, and these are spread over six teachers. Group 4, with the next highest number, has only

five, Group 1 has two, and Group 2 has none. Thus those taught by traditional methods appear to show much more diversity than the other groups, in the errors they make, particularly if they also had intermédiate experience of French.

Overall, Group 2 has a significantly higher frequency of correct responses than the other three groups, and it would seem that few mistakes are likely to be made with this phoneme by pupils with no previous experience, taught by the audio-lingual method. However, the fact remains that a majority from all groups rendered the phoneme satisfactorily.

SPELLING EU - PHONEME /ø/

GP 1 AE	✓	ü	jø	øə	e(:)	əu	jü	ə	ɒ	ɛə	u	M	IC	Number of Variants
deux	16			2								✓		2
veux	15	1				2						✓		3
veut	9	2		1	3	1			1	1		✓		7
feu	9	2	2	1	2							✓	o,wa	7
GP 2 AN														
deux	15			2								✓		2
veux	14	2	1									✓		3
veut	15						1	1				✓		3
feu	13	1	1		1			1				✓		5
GP 3 NE														
deux	16	2		1							1	✓	y,əI,Iø:	7
veux	9	1	3	1			1	1			4	✓	øi,iɔ,i:	10
veut	13	2	2		1							✓	o^u,iou,ɤ,a,en	9
feu	14	1	3				1				1	✓	e,ou,øij.	8

GP 4 NN	✓	ü	jø	øə	e(:)	əu	jü	ə	ɒ	ε^a	u	M	IC	Number of Variants
deux	15	1	1	6								✓	jy	5
veux	16	4		1	2							✓	ɔ:	5
veut	14	2	1		1		1	1	1	1		✓	i , õ	10
feu	13	1	5	2		1	1					✓	jüə	7
TOTAL														
deux	62	3	1	11							1	✓	4	5
veux	54	8	4	2	2	2	1	1			4	✓	4	9
veut	51	6	3	1	5	1	2	2	2	2		✓	7	10
feu	49	5	11	3	3	1	2	1			1	✓	6	9
TOTAL:	216	22	19	17	10	4	5	4	2	2	6		21	

SPELLING EU - PHONEME /œ/

It was explained earlier that the distinction between /ø/ and /œ/ in French is not considered a very valuable one, and was not retained, (as a contrast), for this study. Because the New Zealand [ə:] is a rounded vowel, its substitution for /œ/ (as well as /ø/) should cause no difficulty in comprehension to French speakers, and it has been counted as 'correct'.

An examination of the overall pattern reveals that while the majority rendered the letter sequence satisfactorily, the only variants of slightly high occurrence being /jœ/ and /ə/, there were a large number of variants. However, this pattern is deceptive, as each word studied exhibited different tendencies.

The word déjeuner where /œ/ occurred in the middle of a word had very few variants, except the unaccented /ə/ which occurred 18 times, and [ü] which occurred once. It is interesting to note that of the eighteen occurrences of /ə/, eleven were from the twelve pupils of one teacher.

Neuf and heures both show about the same pattern as each other, with few variations from the 'acceptable' pronunciation. Neuf was sporadically pronounced /nəf/, using a central unrounded vowel, /njœf/ where yod, as found in English, precedes the French vowel, /nœ:əf/, where the

vowel is lengthened and diphthongised, following a New Zealand pattern of speech, and /nuf/, presumably from a mistaken conception of the sound represented by the letters. The pattern for heures was very similar, except that /ə/ and /u/ do not occur as variants, but English [e] does. This variant, which also occurred as a variant of /ø/, possibly stems from a reading error, the 'u' not being noticed.

Jeune and meurt both have more variants than the other words. Jeune has seven recurring variants, meurt has nine; if individual occurrences are included, the number of variants for meurt is 22, an astonishingly high figure.

Jeune was pronounced satisfactorily by a large proportion of the sample, the variant [ü] having a more frequent occurrence than other variants, although nine out of the eleven occurrences were from pupils of three teachers, which means that the spread is not very general in the sample. This error appears to originate in the spelling, although there is no yod preceding the [ü]. The variants [ɔ:] and [ɒ] also occur a number of times, scattered through the sample. These may be reading errors, perhaps associated with the word jaune. The variant /u/ appears to have no simple explanation, and occurs only once, as does the form [üə] which was used by the same person in the word meurt.

Meurt was pronounced 'correctly' by less than half the sample. A number opted for the /jœ/ variant, but otherwise renderings were largely individual or of infrequent occurrence. In addition to forms noted for other words (/ə/, [ʉ], /œ:ə/, [ʉə], [e]) the variants [jʉ], [jʉə] and [juwə] also occurred. These all exhibit the yod, and the first two the [ʉ] characteristic of the English or New Zealand pronunciation of the letter sequence 'eu'. The third has the French /u/, which seems to be a mistake in what was thought to be the sound required. The additional /ə/ and /wə/ of the last two are probably occasioned by the spelling 'r' which in English has the effect of lengthening, and on occasions diphthongising the vowel of the syllable. The number of variants occurring only once was twelve, which suggests that unfamiliar words will not always be tackled in relation to words already known. Instead, any sort of guess is likely to be hazarded.

Intergroup comparison

The frequency of the correct realisation of meurt seems lower in groups 1 and 2, compared with groups 3 and 4, however, the difference is not a significant one.

The realisation /œ:ə/ occurs only in Group 4, but is spread among five pupils of four teachers, so that it is

not an individual phenomenon, as [ʊə] may well be, being used twice by one person in Group 3.

As for the phoneme /ø/, Group 3 has a greater diversity of 'creations', (although not as many as previously), numbering eight in all, compared with four (Group 4), three (Group 3) and two (Group 2). However, with these exceptions the overall patterns are largely the same.

SPELLING EU - PHONEME /œ/

	✓	ə	ʉ	jœ	ɒ	ɔ:	juwə	œ:ə	u	ʉə	e*	jʉə	jʉ	M	IC	Number of Variants
GP 1 AE																
déjeuner	13	5												✓		2
neuf	18													✓		1
heures	18													✓		1
jeune	12		3		1		1							✓	$\tilde{\alpha}$	5
meurt	7			7				2			1			✓/jœ	eœ	5
GP 2 AN																
déjeuner	13	3	1											✓		3
neuf	17													✓		1
heures	16			1										✓		2
jeune	11	1	4		1									✓		4
meurt	6			4				1				1	2	✓	jeɑ:,jœə,ejə:	8

GP 3 NE	✓	ə	ü	jœ	ɒ	ɔ:	juwə	œ:ə	u	üə	e*	jüə	jü	M	IC	Number of Variants
déjeuner	15	7												✓	-	3
neuf	20	2							1					✓		3
heures	22													✓	øij	2
jeune	17		2		1	1				1				✓	wa	6
meurt	11	1		1			1			1	1	1		✓	əjə, ɤ, ej, ʃø, üwə, uə	13
GP 4 NN																
déjeuner	21	3												✓		2
neuf	21			2				1						✓		3
heures	17			2				3			1			✓	ijœ	5
jeune	19		2		1	1			1					✓		5
meurt	13	1	1	5				1						✓	jɛ:, iə, ɛ:ə	8

TOTAL	✓	ə	ü	jœ	ɒ	ɔ:	juwə	œ:ə	u	üə	e*	jü	jüə	M	IC	Number of Variants
déjeuner	62	18	1											✓	1	3
neuf	76	2		2				1	1					✓		5
heures	73			3				3			1			✓	2	4
jeune	59	1	11		4	3			1	1	1			✓	2	7
meurt	37	2	1	17			4	1		1	2	2	2	✓	13	10
TOTAL	307	23	13	22	4	3	4	5	2	2	3	2	2		18	

SPELLING: G

This letter was largely rendered correctly. Of those who mispronounced it, four were consistent in their mistake (two for /g/, two for [dʒ]), and the others made a mistake only once.

Groups 1 and 2 made fewer errors than did Groups 3 and 4, but not significantly so, and we may say that in general this letter does not appear to present a particular problem.

SPELLING G

GP 1 AE		g	d3	M	IC	Number of Variants
gens	17	1		✓		2
genoux	16	1		✓	-	3
GP 2 AN						
gens	16		1	✓		2
genoux	17			✓		1
GP 3 NE						
gens	19	2	2	✓		3
genoux	19	1	3	✓		3
GP 4 NN						
gens	21	2	1	✓		3
genoux	20	3		✓	k	3
TOTAL						
gens	73	5	4	✓		3
genoux	72	5	3	✓	2	3
TOTAL:	145	10	7	✓	2	

SPELLING: GN

A pattern seems to have emerged in the overall realisations of this phoneme, although the pattern of the word campagne, which is probably the most familiar, may possibly be a more reliable indication of tendencies than the overall pattern.

The latter shows just less than a third choosing a normal realisation of this consonant (/ɲ/ or /nj/), about the same number choosing the consonant /n/, and more than a third opting for one of sixteen other variants. The popularity of /n/ may reside in the unfamiliarity of anything resembling a [j] sound at the end of a word, which makes the phone hard to preceive, the phone [n] being the only element clearly heard.

Of less frequent occurrence were the variants /gn/ and /g/, influenced by the spelling, and non-realisation of the phoneme which made the word soigne, for example, into /swa/. Various sorts of nasal vowels and consonants (/$\tilde{\alpha}$/, /$\tilde{\varepsilon}$/, /$\tilde{o}$/, /ŋ/, nasal vowel + n) accounted for the rest of the variants - obviously the phoneme has been heard as a nasal, but the quality of it has not been fixed. Two probable reading errors have also occurred, /ng/, the order of the letters reversed, and the phoneme /ʒ/, which is the pronunciation of '-age' - presumably the 'n' has not been seen.

For the reason mentioned above, the pattern of the word campagne is probably of more interest. A majority rendered the phoneme satisfactorily, but over a quarter of the sample substituted the phoneme /n/. A few people did not pronounce it at all. Three made "spelling-influenced" errors and the remainder substituted a nasal vowel, on one occasion followed by a consonant.

Montagne followed very closely the overall pattern, and does not require further examination.

Soigne presented more difficulty than either of the others, only a very few people realising it normally. About the same number substituted /n/ in soigne as had for the other two words, although they were not always the same people, and the other variants absorbed the 'loss' from the first category. /$\tilde{\varepsilon}$/ in particular shows a much higher frequency for soigne than the other words, which seems to indicate a reasonable attempt at the word, /$\tilde{\varepsilon}$/ being the closest nasal to /a/.

The number of recurring variants is fairly high, eleven for both montagne and soigne, and eight for campagne.

Intergroup comparison

A number of significant intergroup differences were found. In the word montagne, Groups 1 and 2 had a significantly higher frequency for the normal realisation than did groups 3 and 4. Group 3 in particular had significantly fewer than the others at the .01 level, and a significantly higher number of /n/ realisations, also at .01 level.

For the word campagne, the only significant differences involved Group 4, which had fewer correct realisations and more realisations /n/.

For soigne no significant differences were found, probably because of its unfamiliarity, which made it a target for guesses, rather than calculated attempts.

Thus it seems that pupils taught by traditional methods could be expected to have more difficulty with /ɲ/ than those taught by audio-lingual methods, and that the substitution of /n/ by these people could be predicted.

SPELLING: GN

GP 1 AE	✓	n	gn	-	ŋ	g	ʒ	ɛ̃	ɑ̃	ɔ̃	ng	nʒ	nasal + n	M	IC	Number of Variants
montagne	9	2	2			1	2		1			1		✓		7
campagne	14	2	1						1					✓		4
soigne	2	3	2	3	2		4			1			1	3		8
GP 2 AN																
montagne	7	3	1	1	2		1							✓	gɑ̃, gŋ	8
campagne	9	6		1									1	✓		4
soigne		4	3	2	2		1	2				1	2	n		8
GP 3 NE																
montagne	1	12	1	3			2		1	1	1			n	gə,	9
campagne	12	6	1	2			1							✓	ə	6
soigne	1	9	2	2	2		2		4	1				n		8

	✓	n	gn	-	ŋ	g	ʒ	ɛ̃	ɑ̃	ɔ̃	ng	nʒ	nasal + n	M	IC	Number of Variants
GP 4 NN																
montagne	7	6	1	2	1	4	1	1	1					✓		9
campagne	8	13		1				1						n	gɲ	5
soigne	4	10	2		1	3		3			1			n		7
TOTAL																
montagne	24	23	5	6	3	7	4	2	2	1	1	1		✓	3	12
campagne	43	27	2	4		1		1	1				1	✓	2	8
soigne	7	26	9	7	7	5	5	9		2	1	1	3	n		12
TOTAL:	74	76	16	17	10	13	9	12	3	3	2	2	4		5	

SPELLING: H

This was mostly unpronounced, although different patterns apply to different words. The two occurrences of heures yielded a higher number of correct renderings than either of the other two words, possibly because of familiarity. Hiver still retained a sizeable majority of unpronounced 'h's, but hier had almost the same number of occurrences of 'h' pronounced as unpronounced. This pattern would suggest that the concept of mute 'h' is less well known than are actual examples.

There was a tendency for one person to get two, three or four of these wrong - only two people were wrong only once. Two teachers had no pupils with mistakes; on the other hand ten had pupils with hier, hiver and heures (either once or twice) wrong. Thus the pattern seems general only to a certain extent.

Intergroup comparison

Two significant differences were noted with respect to the word hier. Groups 1 and 2 had a very significantly higher proportion of correct responses than Groups 3 and 4, at the .001 level, and Group 4 had significantly lower correct responses than the other three groups, at the .001 level. Groups 1 and 2 also had significantly more

correct responses for the word hiver than did Groups 3 and 4. Thus audio-lingual pupils seem to have had less trouble on these occasions than those taught on traditional lines, particularly those with no previous experience encountering the word hier.

When the frequencies for both occurrences of heures were combined, it was found that Group 4 had a significantly larger proportion wrong than the others, so that it would seem that pupils with no previous experience, and taught on traditional lines are likely to have more difficulty with initial 'h' than those of other groups.

SPELLING: H

	√	X	-	M	Number of Variants
GP 1 AE					
heures	16	1	1	√	4
" "	18			√	1
hiver	13	5		√	2
hier	14	4		√	2
GP 2 AN					
heures	13	4		√	2
" "	16	1		√	2
hiver	13	4		√	2
hier	12	5		√	2

	✓	X	-	M	Number of Variants
GP 3 NE					
heures	22	1		✓	2
" "	23			✓	1
hiver	11	11	1	✓/X	3
hier	11	12		X	2
GP 4 NN					
heures	19	5		✓	2
" "	20	4		✓	2
hiver	12	12		✓/X	2
hier	5	19		X	2
TOTAL					
heures	70	11	1	✓	3
" "	77	5		✓	2
hiver	49	32	1	✓	3
hier	42	40		✓	2
TOTAL:	238	89	2		

SPELLING: -ION

The correct consonant preceding -ion was used in less than 50% of occurrences.

For the word question, a little more than half the sample gave the French consonant, yet under a quarter gave the English equivalent. /ʒ/ was the most popular of other alternatives, /z/ and /zj/ also occurring. These must be due to a mistaken conception of the sound used in French.

In télévision just under half gave the French phoneme, and approximately the same number gave the English phoneme. One person left out the yod, or any /i/ sound, two did not voice the /z/ and this produced /sj/; however, these occurrences were rare.

Less than a quarter of the sample gave attention the correct consonant. Most of the remainder substituted /ʃ/ as occurs in English, although a number of people (in particular four out of five of the pupils of one teacher) pronounced it with [tʃ], the consonant in the English word question.

These all appear to have been influenced to some degree by the existence of English cognates.

Intergroup comparison

Again, the pattern is largely the same for all groups. It appears as if Groups 1 and 2 have a higher frequency of correct scores than Groups 3 and 4, for the two words télévision, and question. However, these differences were found to be insignificant. Groups 1 and 4 also seem to have higher occurrences of [tʃ] in question, and the five in Group 1 come from pupils of six teachers, the eight in Group 4 from the pupils of six teachers, so that the cause is not individual; however, this difference too was insignificant.

Group 3 shows more diversity than the other groups, in terms of extra variants, but numbers are too small for any more definite statement.

In general it seems as if pupils in all four groups could be expected to make the same errors.

SPELLING: -ION

GP 1 AE	✓	ʒ	ʃ	tʃ	z	zj	sj	-	M	IC	Number of Variants
télévision	11	5					2		✓		3
question	12	1		5					✓		3
attention	4		11					2	ʃ	t	3
GP 2 AN											
télévision	11	5	1						✓		3
question	13			2	1				✓	dʒ	4
attention	2		14	1					ʃ		3
GP 3 NE											
télévision	8	11	2		1				3	s	5
question	11	5		3	1	1			✓	tʒ,k	7
attention	8		12	3					ʃ		3
GP 4 NN											
télévision	9	15							3		2
question	12	3		8		1			✓		4
attention	5		14	5					ʃ		3
TOTAL											
télévision	39	36	3		1		2		✓	1	6
question	48	9		18	2	2			✓	3	5
attention	19		51	9				2	ʃ	1	4
TOTAL	106	45	54	27	3	2	2	2		5	

SPELLING: QU

A pattern obscured by the overall total of 108 right and 46 wrong renderings is apparent here. All pupils rendered qu as /k/ in the word quatre, yet confronted with the word question, 46 of these people used the sequence /kw/ as in English. The word should be familiar to most pupils, so that the reason for this substitution is likely to be the association of it with the English word.

The most general ratio of those giving right and wrong responses for question among the pupils of each teacher, was very approximately 50:50; however, the pupils of four teachers differed from this pattern, three teachers having all but one (out of five or six) giving wrong responses, and the other with all correct.

It is suggested that French words with the same or similar form in English would be susceptible to this sort of substitution.

Intergroup comparison

All groups show the same pattern, although Groups 1 and 4 have slightly fewer pupils giving correct responses for question than do Groups 2 and 3. However, this difference was not significant, so we must assume that all groups have equal difficulty in this situation.

SPELLING: QU

GP 1 AE	✓	kw	M
quatre	18		✓
question	6	12	kw
GP 2 AN			
quatre	17		✓
question	9	8	✓
GP 3 NE			
quatre	23		✓
question	12	11	✓
GP 4 NN			
quatre	24		✓
question	9	15	kw
TOTAL			
quatre	82		✓
question	36	46	kw
TOTAL:	108	46	

QUEUE

This word, which was included in the sample to see what distortions would be made to it, both because it exists in English and because it contains two potential sources of spelling influence, 'qu' and 'eu', had many realisations, but did actually show some pattern.

The most frequent occurrence was the straight substitution of the New Zealand realisation of the word - /kjü/, occurring over twice as frequently as the correct version, and the form /kjø/, a common form for the spelling 'eu' (refer to section on EU). Of approximately equal occurrence were the forms [kü], the French pronunciation of spelling 'qu' plus the New Zealand [ü] as occurs with spelling 'eu'; /kwi/ and /ki/ which contain English and French pronunciations respectively of 'qu', but the /i/ seems to have no apparent cause; [kə], which has the French consonant, and a centralised vowel, unrounded, instead of rounded. [kel] also occurred in two groups, but this must have been due to a reading error. A number of other forms also occurred - these may be read from the table.

In general though, a pattern does seem to have emerged, a preference being shown for the English form, the correct form, and that with an additional yod.

Intergroup comparison

Group 1 shows more concentration of variants, most people choosing either /kø/, /kjü/ or /kjø/, whereas the other groups have a much larger spread, Group 3 in particular, with ten variants shows more diversity than the others. However, little more than this observation can be made.

QUEUE

	✓	kjü	kjø	kə	kwi	ki	kü	kel	M	IC	Number of Variants
GP 1	3	9	4	1					kjü	kɛ	5
GP 2	2	7	2	2	2		1		"	kɛr	7
GP 3	5	4	5	1	2	2	1	1	✓/kjø	kuru,kən	10
GP 4	2	8	1		2	3	5	1	kjü	kjüi(2)	8
	12	28	12	4	6	5	7	2		6	

FINAL S

Although the proportion of correct to incorrect renderings of final 's' is in the vicinity of 4:1, 50 pupils out of the sample of 82, i.e., about 61%, pronounced a final 's' at least once, which suggests that pupils are not as sure as they might be of the muteness of final 's'.

Individual words exhibited different patterns. vous, presumably the most familiar word, was pronounced with 's' only once; Paris, comprends, chanteras and gens showed a less positive tendency; heures on both occasions, and ans had final 's' pronounced by one-third of the sample. One would have thought that heures and ans would have been more familiar, if anything, than the other four words where a pronounced final 's' is of less frequent occurrence, and there seems to be little apparent reason why more errors should have been made with these words.

The majority of people made only one or two mistakes (14 made one, 14 made two, 10 made three mistakes, eight made four, one made five and three made six mistakes), so that it seems that the nature of final 's' is known by most people, since errors are seldom made consistently.

Intergroup differences

The pattern for all groups is approximately the same, with the exception of the word chanteras, where final 's' was pronounced only once in Groups 1 and 2, not at all in Group 3 and eight times in Group 4. However, the expected values for each group are too low to apply the chi-square test. Group 3 has a slightly higher frequency of occurrence for unpronounced final 's' in the word heures, (both occurrences), but the difference is insignificant.

However, the totals for each group do show a significant difference, group 4 having a higher total than the others, with 99% confidence (.01 level). Thus one would expect pupils taught by the traditional method, with no previous experience, to make this type of mistake more often than pupils in the other three categories.

FINAL S

GP 1 AE	✓	X	
vous	18		
Paris	16	2	
heures	13	5	
" "	12	6	
comprends	16	2	
chanteras	17	1	
gens	15	3	
ans	12	6	

GP 2 AN	✓	X	
vous	17		
Paris	15	2	
heures	12	5	
" "	9	8	
comprends	13	4	
chanteras	16	1	
gens	14	3	
ans	13	4	

GP 3 NE	✓	X	
vous	23		
Paris	20	3	
heures	16	7	
" "	18	4	
comprends	20	2	✓X*
chanteras	23		
gens	21	2	
ans	13	10	

GP 4 NN	✓	X	
vous	23	1	
Paris	24		
heures	13	11	
" "	15	9	
comprends	17	2	✓X(5)*
chanteras	16	8	
gens	16	8	
ans	16	8	

TOTAL		
vous	81	1
Paris	75	7
heures	54	28
" "	55	27
comprends	72	10
chanteras	72	10
gens	66	16
ans	54	28
	529	127

Mode consistently is ✓.

*6 pupils both pronounced and did not pronounce final 's' on two successive renderings of comprends

FINAL T

Most people seemed to be aware of the nature of final 't' in French, yet mistakes were made by a number of people throughout the sample, particularly in the word meurt, which was probably of least familiarity. Est on both occurrences had a far lower frequency of pronounced 't' than any of the others. 't' was pronounced in tout by about a seventh of the sample, in vert by about a fifth.

The pattern for individuals is of interest, mistakes being made by almost exactly half the sample. Twenty-six people had one mistake, twelve had two, one had three and one had five. The majority had no mistakes, and of those who did, most people had only one mistake; so that the nature of final 't' seems to be generally known, if forgotten on occasions.

Intergroup comparison

The comparison reveals some differences, particularly at an individual level. Pupils in Group 1 who made mistakes, made only one, and of the seven who made mistakes in Group 2, five made only one. In Group 3, four made one mistake, three made two and one made five (i.e. was consistently wrong). In Group 4, however, nine people made one mistake and eight made two.

Final 't' was pronounced by members of Group 4 significantly more times than by the other groups, at .02 level. This indicates that pupils taught by traditional methods, with no previous experience are more likely to pronounce final 't' than either pupils with experience, or taught audio-lingually.

Yet the number of mistakes is not great, and a large majority of all groups could be expected to make no errors.

FINAL T

GP 1 AE	✓	X	IC
vert	14	4	
tout	16	1	-
est	18		
"	17	1	
meurt	16	2	

GP 2 AN	✓	X	IC
vert	13	4	
tout	16	1	
est	17		
"	17		
meurt	12	5	

GP 3 NE	✓	X	IC
vert	20	3	
tout	18	5	
est	22	1	
"	22	1	
meurt	18	5	

GP 4 NN	✓	X	IC
vert	18	6	
tout	19	5	
est	23	1	
"	23	1	
meurt	12	12	

TOTAL	✓	X	IC
vert	65	17	
tout	69	12	
est	80	2	
"	79	3	
meurt	58	24	
TOTAL	351	58	1

Mode consistently ✓, except Group 4, meurt, where equal numbers were right and wrong.

SPELLING: TH

This does appear to be a problem sequence, the most common rendering of it being the unvoiced dental fricative [θ]. However, this overall generalisation is misleading, as the word thé was far less influenced than the word théâtre. Presumably pupils were more familiar with the word thé, and a large number were able to render the 'th' correctly in this word, but did not generalise their knowledge of the behaviour of the sequence in French to the pronunciation of the word theatre.

For theatre, [θ] was by far the most common variant, which is understandable, since this is its pronunciation in the English word. It is interesting to note that the eleven people who pronounced the 'th' of théâtre correctly were spread throughout the four groups, but taught by only four teachers. This means that the pupils of the other eleven teachers, regardless of method, or experience, were consistently wrong.

For thé, there was a slight preference for [θ] over [ð], although one might have expected the latter to be more popular, since this is its pronunciation in the English word the. The use of [θ] and [ð] in thé is a fairly widespread error, and not limited to the pupils of only a few teachers, although it is interesting to note that five out

six of the pupils of one teacher pronounced the word with a [θ], the other used [ð]. This, however, was an exceptional case.

Intergroup comparison

All groups showed approximately the same pattern - more confusion as to the phoneme required in théâtre than in thé, which word, however, still caused difficulty to a number of pupils.

SPELLING: TH

GP 1 AE	✓	θ	ð	M	IC	Number of Variants
théâtre	2	16		θ		2
thé	11	3	4	✓		3
GP 2 AN						
théâtre	1	16		θ		2
thé	13	3	1	✓		3
GP 3 NE						
théâtre	5	16	2	θ		3
thé	13	8	2	✓		3
GP 4 NN						
théâtre	3	20	1	θ		3
thé	14	4	5	✓	1	3
TOTAL						
théâtre	11	68	3	θ		3
thé	51	18	12	✓	1	3
TOTAL:	62	76	15		1	

SPELLING: X

This was mostly rendered correctly (i.e. by not being pronounced), except in the case of *six*, which had a majority pronouncing it as /s/. This is understandable in view of the fact that *six* in a final syllable or standing alone has this pronunciation. The English pronunciation /ks/ also occurred, usually with the short English vowel [I] - [sIks], a normal English pronunciation. The other French pronunciation of 'X' in *deux* and *six*, /z/, (occurring before a vowel), was also used by two people.

Intergroup comparison

There is virtually no difference between any of the groups, except for individual occurrences, although the two traditional groups show a greater occurrence of /ks/ than the audio-lingual groups. However, numbers are very small, and the main tendencies remain the same.

SPELLING: X

GP 1 AE	✓	s	ks	z	M	IC	Number of Variants
deux	17		1		✓		2
veux	18				✓		1
six	9	8			✓	Sept	3
GP 2 AN							
deux	17				✓		1
veux	16	1			✓		2
six	6	10		1	s		3
GP 3 NE							
deux	21			1	✓	3	3
veux	23				✓		1
six	7	13	3		s		3
GP 4 NN							
deux	23	1			✓		2
veux	23		1		✓		2
six	10	12	2		s		3
TOTAL							
deux	78	1	1	1	✓	1	4
veux	80	1	1		✓		3
six	32	43	5	1	s	1	4
TOTAL:	190	45	7	2		2	

SECTION FIVE: OBSERVATIONS ON SENTENCES

In the following pages, observations made about the words of each sentence, usually deviant forms, are noted, particularly if they are found to be recurrent. There does not seem to be any great intergroup differences in patterns, and for this reason the sample will be discussed as a whole. Where there clearly is a difference, this will be particularly mentioned. Words occurring in more than one sentence will be treated once only, on the first occurrence.

SENTENCE ONE

Père ne trouve pas son mouchoir vert

père: The main alteration to this word was to make it Pierre, no doubt a reading error. Another form was [piə] where the /ɛ/ becomes extremely close, following a New Zealand pattern[13], and 'r' is pronounced /ə/, as in English there.

ne: The main error in this word was a realisation /ni:/, to rhyme with English we.

trouve: A number of pupils either omitted the 'v' or changed the tense, either to trouvait, trouve or trouvera Two people also produced a uvular /R/.

pas: The only unusual form noted for this word was /pɒ/, as in the English word pot.

son: The most common error here was to render the word as /sɒn/, a substitution of an oral and more open vowel, plus nasal consonant.

mouchoir: Thirty different forms were noted for this word. Most realisations of the first vowel were either /u/, [ʉ], /y/ or [ʏ], and the consonant was in general /ʃ/. A number of variations appeared in the last syllable - mostly [ei], [ə:], [ɑ:], [ɔ:], [ə] or [ɛə] . The high number of different forms comes from the fact that there are many ways of combining all the variants above, and it

would seem as if everybody tried a different one. Forms used twice were /muʃe/, [mɥʃɛːʳ], [mɥʃeˑ], /muʃə/.

vert: The most common deviant pronunciation of this word was [vəː], the vowel sound as in English verticle, but with mute 't'. The pronunciation of this /t/ in combination with the same vowel was also noticed several times. The form /iə/, as found in père, and a similar form /vijə/ also occurred more than once, and may rhyme with the pupil's own realisation of a word such as there.

SENTENCE TWO

Préférez-vous le théâtre, la radio, ou la télévision?

préférez: The number of combinations and permutations for variants of /e/ seems infinite, and a large number of pupils tried a different combination from everybody else. However, some forms do emerge as more prevalant than others. The first of these is [ˈprefe:reⁱ], the first vowel being the New Zealand phoneme of preference, the second a lengthened form of this, and the diphthong that of "ray".

Another popular combination had an unstressed first syllable as in prefer, and the rest the same as above - [prəfe:reⁱ].

If the middle syllable of the previous form is changed to [ə:] as in prefer, the form [prəfə:reⁱ] results, which was also common.

Two other common forms were [ˈprefərei] and [ˈprifə:reⁱ], the first syllable being a stressed form of 'pre'.

Almost any combination of the variants shown for each syllable seemed to appear, but as may be seen from the table for the phoneme /e/, the most favoured phonemes for the first syllable were [ei] or [e] (French), for the second [e] (English) or [eⁱ], and for the third, [ei], or sometimes [e] (French). However, this does not mean that

most people chose this particular combination, and in fact, only a small proportion of the sample did.

théâtre: Two common forms for this word appear to be English pronunciations. The latter may be more "New Zealand" pronunciation than the former, which is given by Daniel Jones as the R.P. pronunciation. These two forms are [θiətə] and [θɛətə], and a number of people used each. Yet a large number did not, and concocted their own "French" pronunciation of this word. The word was generally broken into two syllables théâ/tre, and we will consider each 'syllable' separately.

The word started mainly with [θ], occasionally with /t/. The first vowel was mostly a diphthong, with first element either New Zealand [e] or New Zealand [i], and second element in the first case either /ə/, /ɑ/ or a lengthening of the vowel, as sometimes found in New Zealand instead of /ɛə/[14].

With first element /i/, the second element was mostly New Zealand [ɛ], [æ], [ə] or [ɑ]. These variants may be explained because they either approach a familiar pronunciation, or fit the English spelling.

The second 'syllable' was quite often [tr], once [tR], but mostly [ə], [ɑ:], [ə:] and New Zealand [e:]. However, the number of combinations again seemed very large, and

there were in the vicinity of forty different renderings of this word.

radio: The English version of this word was by far the most used, accounting for 45 occurrences, or over 50% of the sample. The most common error in the first syllable was the production of a back /ɑ/, which was also lengthened. The word also tended to be divided into three, with a diphthongal glide for the final vowel, giving a form such as [rɑ:diou], instead of [radjo].

télévision: Apart from the two first vowels, and the consonant, which are dealt with elsewhere, a number of errors were made in this word. The most common seemed to be a completely English rendering of the last syllable, with short [I] and a reduced final vowel - [ən], plus English [ʒ], thus [VIʒən]. A very common variation on this was to render the last syllable as [ɒn], or [iɒn], - [VIʒɒn], [VIʒiɒn]. Perhaps this sounds more 'French' since it is not English.

The word le, both in this and in other sentences, was rendered /li/ (c.f. ne > /ni/), to rhyme with we (English) and also became la and les. The word la, also became /li/, le and les. Presumably the substitution of one article for another is a reading error.

SENTENCE THREE

Le bureau de Paris donne sur une rue

bureau was the word with the most variants, and a number of these were recurring. The most common were the New Zealand English form [bjürou] and a modification of this, [bjüro], where the last vowel is the French one. [büro] & [byrou], where one element is correct and the word probably is comprehensible, occur a number of times, as do the forms [buro], [burou], where the /y/ of the first syllable has been confused with /u/. Most of the other forms exhibit a fairly definite individual sort of deviance - [bərou], [bjɛrʊ], [bürei] being but three of about 15 variants.

Paris: The most common substitution in this word was that of New Zealand [æ] for the first syllable, and sometimes a lengthened final syllable, followed by /s/ - /pæri:s/.

de: (c.f. le, ne) in this sentence and in Sentence 15 was rendered /di/ by a number of pupils.

donne: Groups 1 and 2 made no changes to this word, but Group 3 in particular did. The forms donné or donnait appeared to be uttered, either from a reading error or from a mistaken notion of the mute quality of 'e' in donne, by people in both Groups 3 and 4. Pupils from Group 3 also appeared to consider donne as a nasal, giving both /dõ/ and

[dɒŋ] as renderings of this word.

une: In this sentence, and in sentence 15 the forms [ʌn], /õ/, /œ̃/, and [ɒn] were used for une (/yn/).

SENTENCE FOUR

Prendre le thé à quatre heures, c'est autre chose

thé: Both parts of this word were studied in the other section, but the combination of the two phonemes is another aspect. Over a quarter of the sample pronounced the combination correctly, and about a quarter rendered a form [te^{i}] or [tei], which shows only an English accent. But there were many other forms.

/t/ was combined wlso with /ə/, /i/, New Zealand [e], /ɑ/, and [ai]; [θ] with /e/, [ei], New Zealand [e], [ʌ], /i/ and [iə], and [ð] was combined with [ə], [ʌ] and /i/. The latter three are all English forms of the - unstressed, stressed, and before a vowel, but the reasons for all the other combinations seem to be very individual.

quatre: A common form for this word was [kwɔtr], where an open back vowel is used instead of a front one, possibly on analogy with the vowel in the English word quatrain, although the French and not the English consonant is used. [kɔ:t], and [kɔ:tr], similar to the English word quart were also used by several people, and one person offered the word quarter. One other error that was noted was the substitution of [æ] in the first syllable (as in English cat).

c'est was commonly pronounced [sei](c.f. say).

à: In this sentence and in the other three sentences containing à or a, the form [ei] was almost the only variant. [ou], which appears to be á reading error, occurs in this sentence only. The pronunciation [ei] is merely the English pronunciation of the letter 'a'.

prendre: Apart from the substitutions for nasals noted elsewhere, this word suffered other distortions, in both this sentence and Sentence 6. A number of people omitted the last syllable, so that the word became 'prend', others gave the last syllable the wrong pronunciation, producing such forms as prendrez , prendez, or prenez, with various erroneous renderings of /$\tilde{\alpha}$/ as well.

autre: On some occasions the last syllable was not pronounced, and this was usually combined with a distortion of the phoneme /o/; on other occasions the last syllable was given the pronunciation [ei], and forms such as [otrei], [ɤtrei] resulted.

chose: The 'ch' and 'o' of this word have been studied elsewhere, the only other point of note being that a large number of people did not pronounce the /z/, producing such forms as [ʃou], [ʃu], [tʃou], and [ʃo].

SENTENCE FIVE

Deux? Non, j'en veux six mille

Non: The most common renderings of this word were:
[nɒ] - an oral vowel, but at least there is no nasal consonant,
[nɒ̃] - an attempt at a nasal vowel,
[nɒn] - oral vowel + nasal consonant, English pronunciation.

j'en: Reading errors do not really come under the scope of this study, but this sequence was read incorrectly a very large number of times, and it seemed misrepresentative of the situation to leave them out. je n'ai, je n'en, and je ne were all used by people in all groups.

Otherwise the most common variants were [ʒen] (New Zealand [e]), (spelling influenced), [ʒein] (as if j'ai had been substituted for je, and en left out, [ʒən] and [ʒIn], as if an unaccented English sequence, variants where je and en had been separated, e.g. [ʒə en], (New Zealand [e]), [ʒə In], and the nasal /ɛ̃/ - /ʒɛ̃/. A few people (about 10) rendered it correctly.

mille: Apart from variants of /i/ noted earlier, mille was altered by a number of people in the sample, mostly by not pronouncing the final 'l', on analogy with fille, one person even pronouncing a final yod. The only other rendering of note was the diphthongised pronunciation of final 'e' in combination with a short I - [mIlei].

SENTENCE SIX

Je rentre prendre mon déjeuner à neuf heures

rentre: About the only recurrent substitution in this word, apart from the nasal vowel, dealt with earlier, is that of [ei] in the last syllable, making the form rentrez. Some people left out the 't', or the 'r', giving such forms as [rentə], [rendei], or even [renə], but these are probably reading errors.

mon: As for non, and son, the most common substitution in this word was [ɒn] for /õ/, giving [mɒn], an English pronunciation for this spelling (c.f. monarch).

dejeuner: The final syllable of this word was subject to a number of renderings - [ə:] as the 'er' in English her; [ə], as the 'er' in English dinner; /i/ and [əi] for reasons which elude the writer, and, of course, the English diphthong [ei].

je: This was commonly rendered as j'ai, perhaps because of a reading error.

neuf: The liaison with heures - /nœvœ:r/ was noted twice in the whole sample, (once in Group 1, once in Group 4).

SENTENCE SEVEN

On veut un bon feu en hiver

un: A number of alternatives were noted for this word, largely the same for all groups, except Group 2, where four people substituted only une /yn/. /yn/ and [ün] were the most prevalent errors, possibly due to reading errors, possibly due to a confusion of the pronunciation of the two words un and une. Some pupils in groups 3 and 4 also substituted [ʌn] as occurs in uncle. Other substitutions were individual.

en: There was a wide range of variants for this word, in both sentence 7 and sentence 10, but principally they were [In], as in the English word in, [ei], for an unknown reason, and [en], the English pronunciation suggested by the spelling.

hiver: This was another word with a large number of pronunciations. Whether variants started with 'h' pronounced or mute, the first syllable was generally /i/, although on occasions [ɑI], as in the English word hive. Most variation was found in the second syllable, and several times this was not pronounced at all. The correct vowel sound, /ɛ:/, but without /R/ occurred more than other variants; even /R/ was pronounced twice. /e/, as occurs in the 'er' or verbs, [ə:] as in the English word 'her' and

[ə] as in an English unaccented syllable (found when hiver became ['hivə], or ['ivə], account for most other substitutions. A number of times the 'er' seems to have been read as 're', with resulting forms such as [ivre], [hivrei].

SENTENCE EIGHT

Comprends-tu toute la question, Jean? Tu comprends tout?

Most of the words in this sentence were included in the other sections of results. However, some anecdotal remarks are of relevance.

comprends: Various distortions of this word were found in all groups - prend, comprehends (English), comprendez, compehends, commends, /kɒmpent/, /kɒmpris/, to cite a few. These seem to be reading errors, but the variety is remarkable.

Jean: Only once was this pronounced as the English name Jean, although the name John was also heard once. Mostly the name became [ʒi:n] (English Jean with a soft initial consonant) or [ʒɒn], possibly the nearest English equivalent to /$\tilde{\alpha}$/. /ʒ$\tilde{\varepsilon}$/ and /ʒ$\tilde{\varepsilon}$n/ were also used on several occasions, but quite a number of pupils (about one third of the sample) rendered it correctly.

toute: It was particularly noted whether the 't' of this word was pronounced or not, In both sentence 8 and sentence 9, the majority of pupils in all groups were fairly sure of the pronunciation, Group 1 in particular where only two made errors, but in Group 3 almost as many did not pronounce /t/ as pronounced it.

SENTENCE NINE

Attention, tu chanteras toute la chanson

attention: Most errors were apparent from a study of of the phonemes, but two forms noticed, attends, and [atentɔn] seem worth mentioning for their difference from the others.

chanteras: The majority of deviant forms of this word, apart from the nasal vowel, seem to result from a reading error, chanterais being rendered by a number of pupils in each group. There are a number of other forms, but most of them seem individual. Some of those worth recording, for sheer interest, are [ʃæ tərəlei], [ʃæntɔn], [ʃɑ:ntə:z], and [ʃɔnti:ræs].

SENTENCE TEN

montagne: There were only two repeated forms for montagne, out of a total of twenty noted. [mɒntein] was used by five people in Group 4, and /mɒntɒn/ was used by one person in each of Groups 3 and 4. The first syllable was usually rendered by [mɒn] or /mõ/, more variation occurring in the second syllable, with virtually no form being preferred. The type of variant occurring is indicated by the following random selection - [ən], [iα̃], [õ], [eiɲ], [ɑn], [ɑg], [ɒŋ] - which exhibits very little consistency, but mostly shows an attempt at some sort of nasal, either vowel or consonant. The actual variants of /ɲ/ can be read from the table "Spelling GN", but the variants above include the preceding vowel.

difficile: The realisations of individual syllables can be read off the table for the phoneme /i/, but a number of variants are not made apparent by the table, e.g. [difəkleɨ] and [difikilei], [dIfIkiɛ], (no'l), [difisi] (also no'l), [difikʌt], [difIki], and the English word difficult. These are all individual occurrences, but demonstrate the range of unexpected renderings of the word.

été: There were a large number of pupils who pronounced this word with only one syllable - particularly either [et], [it], or [eit]. [ɑ:t], [üt], and être were some of the other variants.

est: The most common deviant form for this word was the English diphthong [ei], both in this sentence and sentence 11.

aussi: The only form for this word which occurs more than once is [ɒzi], or [ɒsi]. One person substituted the word assez.

SENTENCE ELEVEN

L'eau est bonne au fond

L'eau: Most variants are apparent from the table for the phoneme /o/, but some variants, most of which occurred in Group 1, are not made apparent in this table - for example "le /ə:/", "la /ü/", and "la 'ewe" (English female sheep) where an extra article is added.

au: In both sentence 11 and sentence 12 the words à and en were used instead of au.

fond: The forms [fɒnd], with nasal and stop consonants pronounced, and [fo^{u}], (English word foe), where neither are, nor is there any attempt at a nasal sound, both occurred.

SENTENCE TWELVE

A la campagne les gens travaillent à genoux au soleil

campagne: The majority of pupils started this word with /k/, but several used /ʃ/, which confuses it with the word champagne. Most people substituted [ɒm] for /ɑ̃/ in the first syllable, which seems to follow the tendency observed earlier of substituting an oral vowel + nasal consonant for /ɑ̃/. [am], [aem] and [ɑ:n] are similar substitutions, but more influenced by the spelling than was [ɒm]. In the second syllable, variants were very diverse. Most contained some sort of nasal, either vowel or consonant, but the preceding vowel seems quite unpredictable. A small majority may have preferred the term [ein], as in the English pronunciation of champagne.

gens: The most frequently occurring form noted for this word was [ʒen], or [ʒenz], all other forms occurring only once.

travaillent: Many different variants were observed for this word, including the rendering of different words - travail (English) and travaillait (French), both used three times, and travaux. The first syllable was [træ], as in English travel, slightly more than it was /tra/, as in French, but there were no other variants.

However, the rest of the word was subject to so many variations that it was hard to find a pattern. The diphthong [ɑi] was used more than any other form, but often in conjunction with /l/. /i/ and [I] were also used, but always with /l/ or another syllable, e.g. [træ vilɒn] or [træ vijœ]. The diphthong [ei] was also used a number of times, mostly before 'l'. A number of people added several extra syllables, rendering such forms as [travæ lijei], (occurring twice) and [træ vijailijent].

No particular preference seemed to be exercised, as is evidenced by the forty different forms noted.

genoux: There are some forms which stand out as preferred by a number of people. The first of these is [ʒenou], seemingly influenced by the spelling in both syllables. [ʒənou], with the first syllable correct, and the same second syllable as the first preference was also used a number of times, as was the form [ʒən ɔ:], which is perhaps closer to the French pronunciation /ʒənu/, than the others. [ʒəno] was used by four people - again the second syllable is inaccurate.

The vowel /e/ was used in the first syllable more often than /ə/, which suggests that spelling is exercising an influence. Any form of /u/ (e.g. [ü], [jü] or [u]) was

seldom found in the second syllable, the preference being for some sort of 'o' - [ɔ:], [ou], [oʊ], [ɔ]. Very few people pronounced the whole word correctly.

soleil: Many variants were also noted for this word. Some people had substituted the word soulier, presumably because this was familiar to them, while soleil may not have been. Most variants had [ɒ] as the first vowel, although a number had /o/, /u/ or /ə/. The second syllable had many variants, but those recurring were[ijei], [je], [i], [ei], [iɛ], [i]. (The full nature of the final syllable was not shown on the table for yods)

However, the combinations are too many to enumerate, and in general are individual, 42 having been noted.

SENTENCE 13

Anne a dix ans depuis hier

depuis: A number of variants were noted for this word, particularly in Groups 3 and 4. The most common form, observed in all Groups, except 2, was [di:pwi:]. Group 2 had a similar form /depwi/. [dipwa] or [dəpwa] was also noted several times, and [depjü] or [dəpjü]. For the first syllable mainly [di] or [də] were used, the forms used in the second syllable are in the table for /i/, and are likely to be combined with either of the forms noted for the first syllable.

hier: Again, a large number of variants were noted, some of which tended to recur, and some of which appear to be individual. The form [ə:] (as in English her was recurrent, as was the form [hə:], h being pronounced. [ɛ:ə] and [hɛ:ə] (as in English hair), and [ɛ:] were also prevalent, and the word here /hiə/ also occurred, once with a final /R/. Most of the other variants began with /h/, two with [hai], as in the English word high.

SENTENCE FOURTEEN

On soigne la jeune fille, mais elle meurt

Soigne: Many different renderings were given for this word, some repeated several times, but most highly individualised. Those repeated, largely by one or two members of each group, were [sɒn], [swɑ̃], [swɛ̃], [sɛ̃], [sɒg] and [sɔijɐ], most of which would be unrecognisable as soigne. Realisations of /ɲ/ have already been tabled, so that it is only the first syllable which is of interest here. Of the 22 other (individual) renderings noted, only seven of these began with the sequence /sw/, and one of these was a form [swIgne] - which is of very doubtful value. The other forms all began with /s/ followed by almost every other vowel sound - /u/, /ɑ/, /i/, /ɛ/, [æ], [ɐI], nasals and, in a greater proportion than the others, [ɒ], probably due to the spelling.

fille: In addition to variants noted under 'yod' short [I] was also noted, giving the forms [fIli:] (English filly), and [fIl] (English fill).

mais: Two common forms here - [mei] (English may) and [ma] or [mɑ].

elle: This was often rendered as il, probably a reading error. The form [ɘ:] was also noted. Clear [l] was heard in this word on several occasions.

SENTENCE FIFTEEN

Une partie de la queue regarde la porte

partie: The most frequent deviant form for this word was [pɑ:te] or [pɑ:te^{i}], the English word part also being used twice.

regarde: The most common alteration to this word changed it to the form regardait, and a number of people from all Groups did this. The first syllable was frequently rendered /ri/, probably because of the spelling, and this was sometimes combined with the /ɛ/ ending.

porte: A number of pupils did not pronounce the /t/ of this word, rendering the English word poor.

SECTION SIX: INFERENCES FROM RESULTS

While overall patterns emerged for each phoneme or letter (the spelling-influenced errors), it is to be noted that few individuals consistently used one phone for all occurrences of a particular phoneme. Thus it appears that Third form pupils do not merely "speak with an accent", (which is the result of consistent use of one phone to realise a particular phoneme), but use different phones or phonemes for various words which all contain the same French phoneme. It would seem that individual words, rather than principles or concepts of pronunciation are known at this stage. Even on repetitions of the same words individuals may vary their pronunciation. There often appears to be little clarity among pupils as to precisely when a particular phoneme is required, let alone as to the actual quality of the phoneme.

Often the nearest English substitute is used, yet there are many variations for almost every word, many of which bear little resemblance to the phoneme required, but often being a possible English pronunciation of the spelling. On occasions the English stress pattern has been applied to a word, and a then 'weak' syllable has been given the pronunciation appropriate in English, usually /ə/. Where

the word or a similar one exists in English, an English pronunciation is sometimes heard, but more often a half-English, half-French version, or one unlike either, is the outcome. Sometimes variants appear to result only from a mistaken conception of the actual phoneme, being influenced apparently neither by spelling nor by language habits acquired during years of speaking English.

French phonemes with no equivalent in English were found to be a constant source of error. The nearest English phoneme was often substituted, which led to a confusion of French phonemes, distinctions not being made where they are required in French. In the case of /u/ and /y/, the same English phoneme (NZ [ü]) was usually substituted for both, and few pupils showed that they were aware of the distinction.

The nasal phonemes tended to be confused both with the combination 'oral vowel + nasal consonant', giving no effective contrast between bon and bonne, and with each other, which means that both phonemes in attention, for example, were at times given the same realisation.

In the main, the phonetic problems tended to be only phonetic, i.e. causing no interference to the pattern of phonemic oppositions in French, but this varied very much from phoneme to phoneme, and particularly from word to

word. A sufficiently large number made phonemic mistakes for the writer to consider that problems centring around these phonemes are not negligible. Nevertheless, the phonemic contrast /o/:/ɔ/, however anglicised, was made by the majority, and few difficulties seem to have been occasioned by the phonetic differences. A discussion of the phoneme /R/ followed its presentation in the results, and further mention is unnecessary.

Of the distributional problems, /ʒ/ occasioned little difficulty, but many pupils showed uncertainty as to the nature of the phoneme yod, /j/. Few were influenced by the spelling, so that this does appear to be a distributional problem, requiring little effort in correction but to draw a parallel with an English form such as "ah yes", where /j/ follows a vowel. Once the similarity has been perceived, the /es/ of yes is dropped, and the pupil finds himself articulating the final syllable of travail - /a:j/.

Most of the "spelling-influenced" errors were not made by the majority of pupils. However, enough were wrong for one not to be able to assume that there will be no difficulty with these items, and on occasions many variations occurred, made by numbers of pupils. In addition, the influence of spelling may be seen in various realisations of phonemes included in other categories.

The intergroup comparison revealed that general patterns were all very nearly the same, and that the method of teaching or amount of experience exercised no consistent influence on production. Significant differences were neither frequent nor constant, one group showing superiority for one word, and inferiority for another. Sometimes one group used a large number of variants, for the next phoneme it was the opposing group; on the basis of such evidence it must be supposed that on the whole all pupils are likely to make the same types of errors, regardless of method of teaching or previous experience.

At times the influence of a particular teacher was evident; at times one pupil was obviously particularly good or particularly bad in his pronunciation; yet in spite of such individual variations a general pattern of errors emerged, and we may expect these errors, described in the results above, to occur in approximately the same proportions among Third-formers in Christchurch High Schools.

The observations on sentences gave a broader perspective than could be gained from a study of certain details. The comments often showed that there was a preference for one or several forms, among many, although at times the number of deviant forms of words, all differing in some respect, was extremely high.

The reasons suggested for mistakes are intended to enable teachers to take preventative or corrective measures. For example, it may pay dividends to teach the specific contrast /y/:/u/ (tu:tout), or to teach principles of pronunciation in addition to mere words. If the student at Third form level is made aware of such facts that [θ] for 'th' does not exist in French, that the spelling 'on' is nearly always /õ/, that there <u>are</u> different sorts of nasals, but only three really important ones, the differences between which he must hear, his learning of oral French both through High School and University level, could perhaps be more effective. However, the purpose of this paper is not to suggest remedies, merely to expose the errors requiring attention.

CHAPTER SEVEN

DISCUSSION

Conception

On one level, the whole conception of this study may seem very superficial. Many other aspects could have been studied to make it more detailed. If recordings had been taken of the same pupils reading carefully constructed English sentences under approximately the same conditions, the quality of the phonemes used in these sentences could have been compared with those used in the French sentences. This would enable us to discover whether the pupil was substituting his normal English phonemes for French ones. In the present study we have had to make general statements about the use of English phonemes; and whether in fact a particular child used these in his normal English speech is unknown.

A detailed analysis of the pronunciation of French by Third-formers could involve taking photographs of lip positions, X-rays, and spectrograms. All phonemes could be studied, and the data gathered could be compared with that already known for the French language. However, such an undertaking would be a vast and complex one. For a start, the physical difficulties of studying a comparable number of pupils to that involved in the present study, are

prohibitive. Also, if pupils were specifically asked to utter a particular phoneme, the realisation would probably be quite different from that used in normal speech. Even if speech recorded in less artificial conditions were subjected to spectrographic analysis, each vowel or consonant would have to be separated from the preceding and following ones before comparison could begin, and the number of vowel and consonant sequences in an adequate amount of connected speech would be considerable.

On another level, spectrograms and photographs yield concrete data, suited to a very narrow phonetic study, but phonemes are a psychological phenomenon, determined by many factors, and to make concrete the boundaries of formants or of lip- or tongue-positions within which two phones will "sound" the same, i.e. be members of the same phoneme would require a study of too great a magnitude to be included in the present one.

Design

The validity of the design of the test is open to question. Reading errors seem to have occurred; the problem is to know which errors occurred solely because of reading, and which would have occurred in any case. Would the child who read vert as /vəːt/, to rhyme with Bert,

still have given the same response if he had been asked what colour grass is? In future, such a test might be improved by altering the design, although any other type of stimulus is likely to reduce considerably the number of repetitions of all phonemes. It must be decided by those undertaking the research, what the priorities are.

Retrospectively, it seems to the writer, that a picture stimulus could well be an advantage, even if drastically reducing the number of repetitions of phonemes, as responses to these could not be contaminated by other variables. Perhaps it could be something similar to the stimulus used in the Metropolitan School Study Council French Speech production test[1], where items were presented on a card, appropriately labelled in English, and students were required to say in French what they were. As long as items chosen are simple, the element of translation should not be a problem.

On the other hand, a battery of tests, similar to those of Scherer and Wertheimer[2] would also probably give more valid results. Directed statements, scored for one key word only, could perhaps be used (e.g., "Tell me how old you are", scored for the word ans). It is the writer's opinion that the directions would need to be in English, as there was a very high number of no responses to the

questions included in the present study, even to "Quel âge avez-vous?" A noun-substitution type of sentence with an oral stimulus might also be useful, if kept simple enough, e.g. "Elle prend un journal", substituting "book" for "newspaper", becomes "Elle prend un livre". This could be scored for /i/. Even echo responses, which introduce the contaminators of listening ability and aptitude for immediate imitation might be useful, if one could be sure that all words were familiar to everyone, as habitual pronunciation of words tends to be used in such cases, rather than a careful imitation. A section of reading should also be included, as despite the introduction of reading errors, oral production from the printed word is an important aspect of pronunciation.

The type of test suggested by Halliday, McIntosh and Strevens[3] might also be useful. This is based on the principle that unless differences between phonemes are heard they cannot be rendered, and they suggest the construction of a spoken dialogue in which these words are used in crucial contexts. The pupil listens to the text and has to answer a certain question about it, presented in written form, which will indicate whether or not he has heard the distinction. This type of test has an advantage over a phonemic distinction requiring to be distinguished out of context, as the object of the exercise is rather less obvious, and the outcome seems to depend a little less on chance.

A specimen test, based on the distinction between lui and Louis is given by the authors and reproduced here for the convenience of those who have no easy access to the book.

A Bonjour, François. Qu'est-ce que tu fais?

B Bonjour, Philippe. J'attends mon frère Jean. Tu l'as vu?

A Non, je ne l'ai pas vu - Attends! Là-bas, c'est lui?

B Oui. C'est bien lui.

Question: What was the name of the brother they were waiting for? Underline the name you think is the correct one:

Jean Louis

However, this test is certainly not faultless, and also introduced a large factor of listening comprehension, beyond that required for the distinction of the two crucial phonemes, and may be beyond the capacities of Third-formers. The authors note that one single item could be right by chance, and that repetitions would have to be included to eliminate this factor, but it seems to the writer that the final form of such a test, with repetitions of all items, would be a very lengthy one, and performance would be affected by fatigue before many of the items were completed.

However, it has the great advantage of being objective, and taking little time to score, and perhaps a modification of this type of test would be practicable.

These are all possible alterations to the design which should be given further consideration before the construction of such a test in the future. They were investigated before the construction of this one, but reading seemed to have more advantages than disadvantages, and more advantages than other stimuli. In retrospect, the advantages do not appear so clear cut, and the writer is of the opinion that varied stimuli may yield more valid results.

The Sentences

A point for criticism is that difficulties arose in pronunciation when pupils encountered words with which they were not familiar. However, this seems almost unavoidable, and no simple remedy suggests itself, unless it were for the researcher to examine the vocabulary presented in all text books used by Third-formers in all Christchurch schools, and make a list of those words common to all. This would demand a great expenditure of time, and since unfamiliar words were not numerous, at any school, and probably did not distort the results very much, it is likely that the actual gain would not be worth the effort.

The inclusion of words of more than one syllable led to difficulties on occasions, and in future studies it may be best to avoid them. On the one hand they were hard to score, as with an English stress pattern imposed (which often happened) the length and quality of vowels were reduced, and it was hard to be certain what phoneme had actually been uttered. On the other hand, the exact quality of one particular vowel in a two or three syllable word is not always as important as in a monosyllable, where the critical phoneme is used for contrastive purposes. In two-syllable words there are fewer such contrasts to be made, for example there is no word *muchoir which could be confused with mouchoir, even though the contrast mue/mou is distinctive. Thus a deviant rendering of /u/ in mouchoir may not be as important as it would be in the word mou. Against this is the fact that /u/ is the French realisation of the first syllable of mouchoir, and one would expect pupils to be able to pronounce it wherever it occurs, not only in a distinctive position. Again, the tendency to apply English stress and patterns to words is an important fact to be noted, and from this point of view it is well that such words as préférez and télévision were included.

In designing sentences which include critical phonemes, it is important to consider the scorer, and not to include

*hypothetical

too many items in one sentence, nor to have sentences too long. In this test, some sentences contained far too many critical phonemes, and were too long, and at times the scorer came to dread their every occurrence. Some of the first nine sentences in particular required too much to be extracted from them, and would have been much better if they had been shorter. Number 7 was an ideal sentence to score, and it is recommended that no more critical phonemes than were in this one (see p.80) be included in a sentence. This restriction does not apply to such items as the presence of final 't's and initial 'h's which are usually very easily distinguished.

Administration and Control of External Variables

The above two factors could have been dealt with far more easily by bringing all pupils to be tested into the Language Laboratory at the University. With taped instructions large numbers of pupils could have been recorded simultaneously in the same conditions.

This was not possible in the original conception of the study, which included recording the pronunciation of the teacher, an aspect which could not have been done in such circumstances, but as things eventuated, this would not have mattered. However, the atmosphere in a Language

Laboratory strange to the pupils, both as a laboratory and because of its situation in the University, may have been far different from that maintained in the present study, which, although not "classroom" atmosphere was nevertheless informal, and the environment was relatively familiar, helped by the presence of the teacher. It is suggested that if such a test were to be administered in the Language Laboratory, an intensive familiarisation campaign would be advisable.

Evaluation of Phones

At the outset of this study, it was hoped, in addition to the descriptive aspect, to evaluate in an objective manner the phones used by pupils. This would enable a) a comparison between groups to be made, and b) an indication of the relative merits of the realisations of a phoneme to be given. The phrase "relative merits" is deliberately not a precise one, for the difficulty arises as to what criteria should be used for evaluation.

An overall rating, or "global impression" is very subjective, and as Lado points out, unreliable - it sorts out the extremes, but does not grade the middle.

> "The vast majority of cases, which normally fall between these two extremes, are not reliably separated into levels of speaking ability by this approach, because of the complexity of the language and non-language factors involved."[4]

Perren holds it as "seldom reliable without a great expenditure of time by highly skilled testers"[5].

Should one use some sort of scale, a three-, four-, five- or six-point scale, for example? If so, how can an objective scale be devised? Those scales already constructed for phonology on a semi-objective basis are vague, for example a four-point scale with one extreme "the minimum phonemic and phonetic distinctions necessary for comprehension", and the other "superior, could be mistaken for a native"[6]. This takes native fluency as the ultimate, and phonemic distinctions as the bottom of the scale, a very narrow and questionable device, apart from its vagueness. Another five-point scale reported by Earl Rand[7], has "native intonation and speed. Little trace of foreign accent" at the top, and "Unintelligible" as the bottom, both very vague categories as will be seen below.

Of more relevance to the present study, being more suited to beginners than the other scales, but equally vague and subjective, is the five- or six-point scale on the Modern Language Association Examinations Project Oral Proficiency Assessment Chart[8]. The extremes of the 'Pronunciation and Accent' scale are "0 or 1, anglicised, laboured," and "5, ease and accuracy". But how is "anglicism" defined? What is "accurate"? Do the terms

"laboured" and "ease" mean that the normal hesitations which a speaker makes, even speaking his native language, and especially under conditions of stress, will penalise him? Such a scale requires further precision and definition.

Lado also complains of the lack of precision of scales. The rating scales used in other tests discussed earlier were subjective, although the fact that they usually had more than one rater makes them more reliable. However, even if a subjective scale were decided on, the main doubts and hesitations as to their value are the same, and to be discussed shortly.

If a scale is not used, another alternative is to answer a yes/no question about the pronunciation. But on what basis? Is this the sound as spoken by a native speaker? Is this acceptable to a native speaker? Is this intelligible to a native speaker? Native fluency, and intelligibility have both been frequently offered as criteria for oral production, the latter gaining more popularity in recent years. The vague 'relative merits' mentioned above now begin to become more precise, but even so - the sound as spoken by what native, where, and even if one version of a language is chosen (e.g. R.P. or Standard French) what tolerances are allowable? Martinet explains how his study showed the large phonological tolerance which

French speakers at that time had, even in Paris itself - "une large tolérance phonologique est le fait des usagers du francais d'aujourd'hui ... comme auditeur, c'est à dire envers autrui, les nécessites de la vie pratique lui ont appris à se montrer beaucoup moins intransigeant (qu'envers lui-même)"[10].

The views of a number of prominent linguists and psychologists are presented below, not as evidence of any conclusive view, but to expose the difficulties inherent in the evaluation of pronunciation, in view of which the writer did not feel able to undertake such a task for the present study.

Lado approaches the general topic of pronunciation from the point of view of role[10]. He suggests that there are three different attitudes to the role of pronunciation. The first is that it is unimportant, and that the sounds of the learner's native language should be used in speaking, but the absurdity of this assumption is shown in a humourous extract from The Education of Hyman Kaplan. Mr Kaplan, explaining the meaning of 'vast', in 'the vast deserts of America', names the four 'diractions' - "de naut, de sot, de heast and de vast". On being apprised of his confusion, an illuminating insight comes to him, and he now explains, "Ven I'm buyink a suit of clothes, I'm gettink de cawt, de

pents an' de vast." It is apparent that the ambiguities occasioned by the use of native phonemes in a foreign language could be extremely detrimental to comprehension.

The other extreme is that nothing short of native pronunciation is adequate. However, as is pointed out by Lado, and was explained earlier in this thesis, only young children are likely to be able to achieve such a pronunciation, and it is unrealistic to expect adults to do so without falling short on some points. Again, this native accent criterion makes a test particularly difficult to score objectively, if it is possible at all, not only because most people would fall short of the standard, and the degree of 'deviation from the norm' would have to be evaluated, but also because of difficulties in defining an absolute norm, or tolerances allowable.

A third point of view is the criterion of intelligibility. However, this standard is hard to define - intelligible to native speakers, but to what native speakers?- "a native speaker that has been in contact with foreign speakers will understand utterances that sound entirely foreign to another native speaker"[12]. Lado suggests that phonemes are a way out, and that these contrasts suffice for ordinary communicative purposes. But the writer wonders how one is to know what phones (i.e. allophones) will be understood as

a particular phoneme, in which environment. Martinet has pointed out a tolerance on the part of French speakers - what are the bounds of this tolerance? Under what conditions does a phone, say [ɔ:], cease being an allophone of /o/ and become an allophone of /u/, or is it ever either of them anyway? Phonemes do not seem to be an entire solution unless answers to such questions can be found.

Intelligibility, Lado also notes, needs to be defined formally and specifically beyond the idea that students should be understandable to natives[13]. This leaves us with such problems as what natives are to be used as touchstones, since different natives have different skill in understanding foreign speakers. Ingram[14] (below) elaborates slightly on this. Cherry goes further, maintaining "recognition depends upon the past experience from which an individual acquires his particular habits ... to a major extent the response set up on any specific occasion will depend on the immediate past experience of the perceiver and on the environment at that time"[15]. Thus intelligibility raises problems not only of definition, but also of judges of this factor, and conditions at the time of judgement.

In the context of the present study, where, for a judgement test, many repetitions of either the same words or sentences would be heard, one would have additional

problems. Once a judge had heard and understood all utterances once, subsequent repetitions of the same utterances would be increasingly more intelligible. Ideally one would need a new judge for every pupil, or set of utterances, although this would not be practicable, and would raise more problems, particularly of how to standardise judgements.

With respect to the lack of precision of scales, Lado mentions a production scale which "uses a vague concept of oral readiness as the basis of fluency, which itself remains undefined". He continues:

> "References to pronunciation in the scoring scale are similarly vague and ineffective. Examiners are not able to decide objectively whether a response falls into one of even a rough 3-point scale with instructions like these:
>
> 1. sufficiently approaches native speech to be completely understandable,
> 2. can be understood, though with difficulty, because there are sounds which he does not utter correctly,
> 3. would not be understood by natives because his pronunciation is so different from theirs.
>
> Or another scale:
>
> 1. Partially intelligible ... the response is either incomplete, or exceedingly hard to understand; poor pronunciation or usage.
> 2. Intelligible, but laboured. The delivery is hesitating, or regressive, but does not contain amusing or misleading errors in pronuncation or usage.
>
> When is pronunciation so different from that of natives that the speaker would not be understood by them? What natives are we to take as guides? How can we tell if those natives would or would not understand? What is poor pronunciation? These are not

> theoretical questions. They need to be answered by the conscientious examiner and they should be answered the same way by all examiners."[16]

Lado also points out the difficulty of scoring a pronunciation test and the impossibility of objectivity: "Fully objective scoring is not yet possible in direct testing of pronunciation."

Elisabeth Ingram, a psychologist and lecturer in the Department of Applied Linguistics, University of Edinburgh, has similar views up to a point, and introduces further complexities. She states that in language learning, pronunciation always presents problems, not the least being to specify "the desired terminal behaviour".

> "It is easy to say perfection, i.e. completely faithful imitation of native behaviour, but one never gets it. It is equally simple to say that one aims at intelligibility, but it is more difficult to say what intelligibility is. Intelligibility is a speaker-hearer concept, depending as much on the hearer as the speaker."[17]

Ingram up to this point expresses similar opinions to Lado, and in part, Cherry, but then introduces another aspect of intelligibility.

> "Intelligibility is not simply a matter of pronunciation; familiar and expected statements are much easier to understand than unpredictable and strange utterances".

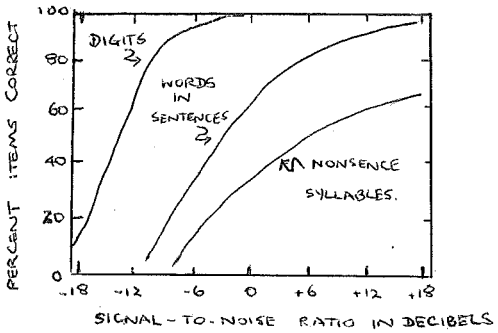
George A. Miller treats this subject in some detail in the book Language and Communication.

> "If verbal behaviour were not highly variable", he states, "it would be useless ... This variability complicates an already complex study and makes it difficult to evaluate the relative effects of the many variables that influence verbal behaviour."[18]

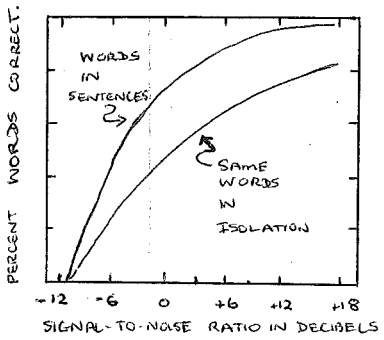
On a specific level, he introduces the theory of information. "When the stimulus is one of two possibilities, it is less informative than when it is one of 10,000 possibilities". This, when applied to the subject of communication and language testing, means that if a phoneme which is being tested, could be any one of a large number of phonemes, the chances of it being intelligible are less than if it could be one of two possibilities, not because it is uttered more clearly or accurately in the latter case, but because the information carried by the actual phoneme is relatively small. The hearer has a 50% chance of guessing it right for a start.

A test showing the relative intelligibility of phonemes in different situations was carried out by Miller, Heise and Lichten[19], and is reported by Miller. They recorded three different sets of test words; in one case the test words were the digits from 0-9; in another case the sentences were read and scored for the major words, and in the third case, nonsense syllables were used, and recorded in phonetic notation. These were played against varying degrees of background noise, and a graph showing

the effect of the test material is given below. In order to get 50% of the items correct, the nonsense syllables had to be 17 decibels more intense than the digits. They also did a similar test using words in sentences and the same words in isolation, with similar results. Their graphs for both tests appear below.



Articulation scores obtained for different types of test materials.



The effect of the sentence context upon the articulation scores for words.

The reasons for these differences are explained by Miller:

> "The principle factor at work is the restriction of the number of possible speech sounds a listener can insert to replace the inaudible portion of the utterance ... solely on the basis of probability, therefore, we expect a listener to get a higher score for words than for nonsense syllables."[20]

Words in sentences also limit the range of possible substitutions and yield test scores higher than for the same words in isolation, and Miller states that "whole words can be replaced correctly when they are missing from a sentence." How can one hope to judge the intelligibility of a single phoneme if a whole word can be guessed correctly?

G.E. Perren [21] extends the range of intelligibility from a sentence to a whole context. He first reiterates the by now familiar problems: "In language teaching and language testing the criterion is usually assumed to be that of native speakers without further definition. Terms such as "native-like skill" are commonly used at the top end of rating scales, but what exactly do they mean? What kind of native, speaking about what, and to whom?"[21] These are questions he leaves unanswered. He offers intelligibility as an alternative criterion, but states "intelligibility is

> not merely the production of identifiable sounds in a conventional order; it depends on a situation which includes a particular listener. The meaning of what is said must be the final criterion, and it can only be judged by reference to a context of situation and audience ... Attempts to assess ability in spoken

> language objectively, in terms only of sounds or signals, independently of the meaning they are being used to convey could be misleading."[22]

Cherry also takes this view: "A word is essentially contained in a context and the full effect of the word is felt only when it appears in context"[23].

Such a broad interpretation of intelligibility makes testing of it extremely difficult. Alan Davies says:

> "Intelligibility is a difficult concept which has, so far as is known, not yet been precisely enough defined for it to be set up as a standard and tested."[24]

Ingram is of the opinion that "intelligibility testing is still very much at the experimental stage; it is nowhere near being useful in practical testing. There is as yet no practical solution to the testing of intelligibility, i.e. the communicative aspect of speaking skill."[25] If intelligibility for the purposes of human communication, which is intelligibility in its broadest and probably most valid context, is taken to be the criterion of judgement, the complexities of an evaluation seem to make it an impossible task.

A limited investigation into the subject, with respect to English was made by Strevens[26] at the University College of Cape Coast, Ghana. Recordings were made of lists of monosyllabic words spoken by speakers of G.C.P. (Gold Coast pronunciation) and a speaker of R.P. These recordings

were played to audiences of R.P. speakers and speakers of G.C.P., and the ability of the listeners to write down the words spoken was reduced to a percentage and taken as an indication of the "intelligibility" of the speech under those conditions. However, this places limits on the concept of intelligibility which would be unacceptable to many linguists.

The problem of criteria for evaluation appears a difficult one. The writer suggests yet another criterion, for which neither opposition nor defence has been found - "acceptability to native speakers"; a concept which would be neither as narrow as "native pronunciation", nor as broad as "intelligibility", for while a word may be "intelligible" to a speaker, i.e. he can work out from the context what the word is or its meaning is, there must be a threshold after which the word is distinguishable with little if any effort, and at the same time is not offensive to the ear of the native speaker. The speaker of a language which includes no diphthongs may find a diphthong from or to the position of a vowel in his own tongue "unacceptable", e.g. [ou] for /o/; on the other hand, a pure vowel of a different quality, [ɔ:], for instance, may well be "acceptable". A French speaker using the consonant /ʒ/ for /dʒ/ in English may be "intelligible", but the sound may not be "acceptable" to

the English. This of course is mere speculation - the opposite could equally apply.

The concept of acceptability implies a value-judgement, but could be further defined. Quirk and Svartvik[27], in an experiment to investigate grammatical acceptability in English used the divisions 1) wholly natural and normal, 2) marginal or dubious, 3) wholly unnatural and abnormal, to try to determine acceptability. However, besides having people make judgements about certain sequences, they included an 'operation test', which required subjects to perform operations involving the sequences under study, to make the test less consciously judgement-orientated. It may well be possible to devise some similar combination of tests to determine the acceptability to the French speaker of various realisations of phonemes.

However, the same problems apply to acceptability as to other criteria. What is an exact definition? Acceptable to whom, under what circumstances? Is what is acceptable to native French speakers who have been living in New Zealand for some years, and accustomed themselves to English, the same as that which is acceptable to a Frenchman living in France?

The unsolved problems of evaluation are many. What criteria should be chosen? Native Fluency? Intelligibility?

Acceptability? How are each of these defined? Who can do the evaluating? Would this yield objective criteria anyway? Again, the design of the test was to yield information about the pronunciation of phonemes, not to be a test of intelligibility, communication or acceptability. If this were the case, the design would have been different. If this were to be done now, the data at present on tape would have to be completely re-arranged.

Thus, even if one could be certain of the validity of such an evaluation, even if one could find positive and well-founded answers to the many questions asked in the preceding pages, a whole new study would need to be designed. The data would need to be re-arranged, "native speakers" of suitable education, place of origin, 'naivety' and willingness to cooperate would need to be found, and a whole new 'test' would have to be given. It is suggested that the complexities outlined in this section mean that evaluation would require a much lengthier and more detailed treatment than is possible in the present study.

CHAPTER EIGHT

CONCLUSION

In Britain and the U.S.A., many studies of the problems of learning a foreign language, French included, have been made. Yet the relevance of these to the teaching of French in New Zealand High Schools is not always great: they have been made for students whose pronunciation of English, and almost certainly of French, is different from that of the New Zealand student. Often too, they have been at a higher level in the educational strata, involving students of 17 or 18 years of age, or older. In view of this factor, the sample for this study was selected from the population of Third formers learning French in Christchurch schools, and it is to these pupils that the study is expected to be most relevant, although one would suppose that the results would be similar for all city schools in New Zealand.

The study was not designed to be comprehensive, but to take only one aspect of language learning and teaching - oral production. The aim was to discover the most common errors being made in the oral production of a number of French phonemes, spellings, and words, and to present these, together with suggestions as to why they had been made. It was hoped that a knowledge of errors, especially the most

common ones, and their possible source, might be of help to teachers of French at this level. All would be aware that their pupils are making mistakes, but it is difficult to know firstly, what mistakes are likely to be made most often, and secondly, why they are being made. When the frequency of an error is known, teachers can ascertain how likely it is that such an error will be found among their pupils. When the probable reason for it is known, corrective or preventative measures can be taken.

The writer considers that the aim has been fulfilled. The sample was large, selected randomly from a restricted population in what was thought to be a representative cross-section of Christchurch High Schools. For greater reliability, divisions were made according to method and experience, in case significant differences occurred between groups. It must be borne in mind that the aim was not to compare the results of different methods of teaching under ideal and artificial conditions, but merely to ascertain if the error pattern was different for pupils taught by different methods as they are used in practice. The test design was, in the writer's opinion, a valid one, and the results show the errors to be expected from members of the population. The general trend of these errors was given in a summary of the results; variants have not been evaluated, the study being a descriptive one. Many teachers will probably have

differences of opinion as to the seriousness of errors, and a teacher's attitude to pronunciation will largely dictate which errors he considers important enough to merit special attention.

The obvious follow-up to such a study is a work detailing how to correct the errors made. This paper has presented the errors, and suggested reasons for their occurrence, but it is left to the teacher to devise a means of correction. There are many conflicting opinions on the most efficient way of doing this - repetitive imitation, articulatory descriptions, contrast drills, drawing parallels with the native language or attention to blatant differences. The teacher may have his own method; if he has none, it may pay to adopt one. Then, at least, errors might be systematic, and thus viewed merely as "accent", whereas at present one individual often utters several different phonemes for the same French phoneme occurring in different words, or even in repetitions of a single word.

Another valuable follow-up study would be an evaluation of the errors found (according to some specified criteria) as already discussed in the previous chapter.

A narrower investigation might also be useful, to ascertain the precise differences between New Zealand vowels and consonants, and those of French, for devising remedial pronunciation methods, but this is more suited to

a higher level of study, where the student desires to "perfect" his accent. At the elementary level, approximations are more appropriate.

Yet this study showed that in many cases even approximations to French phonemes were not achieved. A tremendous variety of realisations of phonemes occurred, many of which were vastly different from either the 'norm' or an approximation to it, and for some of which no reason was obvious. Errors of all types predicted took place - phonemic, phonetic, distributional and spelling-influenced - and took place in all four divisions of the sample, there being no great differences in error patterns for those taught by either method, Audio-Lingual or Traditional, nor for those with or without Intermediate Experience.

Thus it appears that many errors are predictable, and this knowledge should be useful to teachers. It is hoped therefore that the information presented in this thesis will be of value to those involved in the teaching of oral production of French to Christchurch Third formers.

APPENDIX

TEACHERS' PRONUNCIATION

As stated in Chapter III, it was originally intended to control for the variable of teacher's pronunciation by classifying them into two groups according to a number of specified criteria regarding pronunciation of French. For the purpose of recording his voice, four questions to be asked by the teacher were included in the design, namely

Comment vous appelez-vous?

Quel âge avez-vous?

A quelle école allez-vous?

A quel lycée allez-vous?

Depuis combien de temps étudiez-vous le français.

To try to find objective criteria which could be used to determine the category to which each teacher would be assigned, recordings were taken of 21 final-year Training College students, who were still studying, and the following year would be teaching, French. It was thought that the mistakes made by these 21 students would be similar enough to those made by teachers for criteria to be established. The students were required to read the five sentences which the teachers would be reading.

From these recordings an inventory of mistakes was compiled. This was on two levels:

A. Sentence level

Items considered: 1. Sound grouping: whether the sentence was divided appropriately, e.g. /kõbjɛ̃dtɑ̃/ or /kõbjɛ̃ də tɑ̃/ (combien de temps).

2. Fluency: whether enunciated with difficulty and hesitations.

3. Division into syllables: whether the word (e.g. combien) is pronounced as a whole /kõbjɛ̃/ or divided - /kõ-bi-ɛ̃/.

(In fact, division into syllables was usually combined with phonetic or phonemic errors, resulting in a form such as /kɒmbijʌn/.)

4. Intonation.

Each student was rated on a yes/no basis to the first three items. For item 4, the main intonation pattern for each sentence was sketched.

B. Word level

Variants for each word were noted, examples: comment /kɔmɑ̃/ - t pronounced,

appelez /aple/, /æ pəle/; /apʌle/, /æ pʌle/; /apɛle/, /apɛle/, /æ pɛle/.

temps: /tɑ̃/ s pronounced

/tɔm(p)/

/tɔm/

/tõ/

/tõm/

After the inventory had been compiled, students were rated according to whether or not they had given the "correct" pronunciation to each syllable. The total number of mistakes for this section was ascertained. On the sentence level, every negative answer to an item was given a score of 1, every positive answer received a zero. On the word level, each mistake was given a score of one. These scores were added to give a numerical total for each student. In addition, the researcher wrote down her subjective opinion of the "overall rating" of the voices, on three separate occasions. These lists were subsequently compared, and were found to be very nearly identical. The scores were ranked and the subjective opinion set against the scores for comparative purposes. Although those rated best scored highest, and those rated poorest scored lowest, those who were not at the extremities were not as clearly differentiated as would be desirable, and the measuring instrument was considered altogether too crude for this task.

It was thought that a system of weighting might be necessary, but this introduces the question of what mistakes are most important, and by how much in terms of a numerical score. Intonation also seemed impossible to rate objectively, as the acceptability of an intonation pattern often depends on the specific context. However, it is noted in passing that many of the sentences were read in a monotone, with absolutely no variation. The notion of "correctness" is also called into question - what is correct? Can a non-native speaker make adequate judgements of correctness, especially at this level? A detailed treatment of criteria was given in the Discussion, and all the difficulties outlined for the study of pupils, applied equally to Student-teachers or Teachers.

An adequate objective test seemed unattainable. The words of G.E. Perren, Director of the Centre for Information on Language Teaching, London, bring some comfort to the thwarted researcher - "objective tests of spoken language available at present often appear extremely unsatisfactory". Robert Lado, Academic Director of the Institute of Languages and Linguistics, Georgetown University, Washington, makes the general observation:

> "Testing the ability to speak a foreign language is perhaps the least developed ... in the language field."

It seems that others too, have met many difficulties.

It appeared that subjective judgements would have to be made by native speakers in order to find valid criteria. However, if native speakers are to be introduced to make such judgements, it is more logical for them to judge the teachers themselves, since the sole purpose of analysing the students' pronunciation was to establish objective criteria. If sufficient native speakers could be found, and the voices presented to them on a tape, a number of subjective judgements could be made, which could then be compared among themselves for consistency. A tentative design was drawn up, which is presented below, as the reason for deciding not to pursue this aspect was not the lack of a design. In fact, the researcher is still of the opinion that such a test, perhaps with some modifications, would yield valid results.

Taking 15 as the number of people whose pronunciation is to be evaluated, 20 recordings would actually be heard on the tape, five of these being repetitions, as a check on the consistency of the judges. One voice, speaking probably "standard French", if this were decided upon as the standard, would first be heard, and the judges would be told: "This is the standard". Using this standard as a base, judges would be required to make evaluations of degrees

of similarity or dissimilarity to the standard, which could be interspersed at equal intervals among the other recordings. Examples of both extremes, "anchors", would be given, always identified as such, e.g. "If a pronunciation sounds like this, put it in the category "extremely similar". Judges would have in front of them a sheet with six categories arranged horizontally, and the numbers of each recording vertically, thus:

	EXTREMELY SIMILAR	VERY SIMILAR	SIMILAR	DISSIMILAR	VERY DISSIMILAR	EXTREMELY DISSIMILAR
1						
2						
3						

By making the test a judgement of similarity and dissimilarity, the researcher can set his own standard and anchors, and notions of "correctness" are avoided. In psychological studies, six categories have been found quite satisfactory for general discriminatory purposes, although eleven and even 13 have been used with reliable results. As the original intention of this evaluation required only two categories, six is a quite sufficient number of degrees of discrimination. All three degrees of similarity are then

called one category, as are the degrees of dissimilarity.

As stated above, the reason for failing to pursue this aspect was not lack of design. In part, it may be described as 'ethical'. Although the voices of the teachers were recorded with their knowledge, no suggestion was given that any use might be made of them, far less an evaluation. The question arose, in discussion, as to whether one could seriously carry out an evaluation of the speaking ability of people, albeit anonymous, without their permission. This matter was discussed with many people, lecturers, teachers and a post-primary inspector, many of whom felt that they personally would not be happy to find they had been 'evaluated' without their knowing it, and that permission would have to be sought.

Anonymity had been one of the firm promises made to teachers, to the extent that the names of some of those participating were unknown. These could probably have been ascertained by visiting the school once more, after which letters requesting permission to make these judgements could have been sent. However, at this point the actual value of making such evaluations was questioned. It would have entailed many hours more work, and would only have resulted in a two category classification of teachers with respect to pronunciation. (Any more categories would have made numbers far too small to generalise from.) By the time the

'ethical' question was raised, the pronunciation of all the children had been analysed, and it seemed as if the influence of teachers was more an individual one than anything else, and any notable effects could be discerned by direct inspection of the responses of their pupils. Thus it was decided to abandon the division of teachers into two categories.

REFERENCE LIST: Symbols for consonant phones.

ENGLISH

Key words are not required for the following letters as they have their customary English sounds:

p, b, t, k, m, n, l, r, f, v, s, z, h, w.

Symbol	Key Word
g	give
ʒ	measure
ʃ	ship
tʃ	chin
dʒ	jam
ŋ	long
θ	thin
ð	then
j	yes

FRENCH

Consonants occurring in French but not in English:

ɲ	agneau
R (uvular r)	radio

Semi-consonant:

ɥ	huit

****

PUPIL'S SCORE SHEET.

NAME..... SCHOOL..... S. Loc.....
Time.....

R initial																				
intervoc.																				
pre-cons																				
post-cons																				
final																				
u																				
e																				
y																				
o	ou		✓		✓		o		✓		ou		ɔ:		ɔ:					
ɑ																				
œ																				
ø																				
i																				
ɔ																				
õ:ã																				
u:y																				
o:ɔ																				
open:nasal																				
ʒ initial																				
other																				
qu																				
-ion																				
x																				
/j/ (1)																				
g																				
ch																				
gn																				
th																				
h																				
c																				
final cons																				
t																				
s																				
d																				
queue																				

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OVERALL COMMENT:

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CONFIDENTIAL APPENDIX

SCHOOLS SELECTED

AUDIO-LINGUAL: Cashmere High School
Christchurch Boys' High School
Avonside Girls' High School
Christs College

TRADITIONAL: Cashmere High School
Christchurch Boys' High School
Christchurch Girls' High School
Hillmorten High School
Rangi-Ruru High School

Christchurch Boys' High School and Christchurch Girls' High School were chosen as they tend to have similar populations selected largely on academic merit.

Cashmere, Hillmorten and Avonside Girls' High Schools were selected as being ordinary State Secondary schools, of similar natures. However, no reply to my letter to the Head of Department of the latter school was received, and a telephone conversation resulted in the information that the Audio-Lingual method was not taught at the school (information contrary to that from other sources), and that it would not be convenient to take recordings during the time available. Linwood High School was therefore approached, as it was also the same type of school, and

proved willing to cooperate. As it is co-educational, whereas Avonside is a Girls' School, it is an even better match for the others.

Rangi-Ruru, a private Girls' School, was matched with Christ's College, a private Boys' School, but the impossibility of getting Christ's College pupils under the same experimental conditions as the others (the teachers could not be present, for various reasons best understood by those who understand the administration of this school), added to the fact that the school has a full language laboratory*, led to the decision to exclude Christ's College from the sample.

It was then necessary to find a school to match Rangi-Ruru. No other private school teaching the audio-lingual method could be located, and a large state school in a similar area, Burnside High School, was chosen. This school has a well-developed audio-lingual teaching system, and any differences in the matching should be compensated for by the size of the school and its geographic location.

Those schools participating in this study and being considered a representative cross-section of Christchurch Schools, were:

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*although Philip D. Smith, Jnr, found that "no language laboratory as employed influenced achievement more than a classroom tape-recorder". See p.25 of this thesis.

Trial:	Cashmere High School
Audio-Lingual:	Christchurch Boys' High School
	Burnside High School
	Linwood High School
Traditional:	Christchurch Boys' High School
	Christchurch Girls' High School
	Rangi-Ruru Girls' School.